

9 September, 2003

Bruce Lewis Environmental Resources Management 2525 Natomas Park Drive, Suite 350 Sacramento, CA 95833

RE: Aerojet RI/FS Work Order: P308071

Enclosed are the results of analyses for samples received by the laboratory on 08/04/03 14:17. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari Project Manager

CA ELAP Certificate #2374

Angelee Care





Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

Reported: 09/09/03 16:50

P308071

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
32D-SB07-2.5	P308071-01	Soil	08/04/03 09:05	08/04/03 14:17
32D-SB07-15	P308071-02	Soil	08/04/03 09:20	08/04/03 14:17
32D-SB06-2.5	P308071-03	Soil	08/04/03 12:05	08/04/03 14:17
32D-SB06-10	P308071-04	Soil	08/04/03 12:30	08/04/03 14:17
32D-SB06-15E	P308071-05	Water	08/04/03 12:40	08/04/03 14:17
32D-SB06-15	P308071-06	Soil	08/04/03 12:45	08/04/03 14:17
32D-SB06-25	P308071-07	Soil	08/04/03 13:10	08/04/03 14:17
32D-SB06-30	P308071-08	Soil	08/04/03 13:30	08/04/03 14:17
32D-SB06D-30	P308071-09	Soil	08/04/03 13:30	08/04/03 14:17



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015B Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-2.5 (P308071-01) Soil	Sampled: 08/0	04/03 09:05	Received	1: 08/04/0	3 14:17					
Diesel Range Organics (C10-C28)	14		3.1	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		366 %	52-1.	33		"	"	"	"	S-02
32D-SB07-15 (P308071-02) Soil	Sampled: 08/0	4/03 09:20	Received	: 08/04/03	3 14:17					
Diesel Range Organics (C10-C28)	ND		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		123 %	52-1.	33		"	"	"	"	
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/0	04/03 12:05	Received	1: 08/04/0	3 14:17					
Diesel Range Organics (C10-C28)	6.0		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		154 %	52-1.	33		"	"	"	"	S-02
32D-SB06-10 (P308071-04) Soil	Sampled: 08/0	4/03 12:30	Received	: 08/04/03	3 14:17					
Diesel Range Organics (C10-C28)	ND		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		126 %	52-1.	33		"	"	"	"	
32D-SB06-15E (P308071-05) Wa	ter Sampled:	08/04/03 12	:40 Recei	ived: 08/(04/03 14:17	1				
Diesel Range Organics (C10-C28)	0.078		0.052	mg/l	1	3080174	08/11/03	08/18/03	EPA 8015B-SVOA	
Surrogate: Octacosane		97 %	54-14	41		"	"	"	n .	
32D-SB06-15 (P308071-06) Soil	Sampled: 08/0	4/03 12:45	Received	: 08/04/03	3 14:17					
Diesel Range Organics (C10-C28)	ND		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		131 %	52-13	33		"	"	"	n .	
32D-SB06-25 (P308071-07) Soil	Sampled: 08/0	4/03 13:10	Received	: 08/04/03	3 14:17					
Diesel Range Organics (C10-C28)	ND		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		121 %	52-1.	33		"	"	"	"	





Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015B Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-30 (P308071-08) Soil	Sampled: 08/04/	03 13:30	Received	08/04/03	3 14:17					
Diesel Range Organics (C10-C28)	18		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		132 %	52-13	33		"	"	"	"	
32D-SB06D-30 (P308071-09) Soil	Sampled: 08/0	4/03 13:30	Receive	d: 08/04/	03 14:17					
Diesel Range Organics (C10-C28)	8.4		5.0	mg/kg	1	3080254	08/14/03	08/25/03	EPA 8015B-SVOA	
Surrogate: Octacosane		127 %	52-13	33		"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-2.5 (P308071-01) Soil	Sampled: 08/0	4/03 09:05	Received	: 08/04/03	3 14:17					
Silver	ND		0.33	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	13000		24	"	"	"	"	"	"	
Arsenic	3.5		0.47	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.7	"	1	"	"	08/18/03	EPA 6010B	
Barium	100		0.47	"	"	"	"	"	"	
Beryllium	0.32		0.047	"	"	"	"	"	"	
Calcium	2400		47	"	"	"	"	"	"	
Cadmium	ND		0.47	"	"	"	"	"	"	
Cobalt	11		0.33	"	"	"	"	"	"	
Chromium	56		0.47	"	"	"	"	"	"	
Hexavalent Chromium	0.64		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	33		0.94	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	21000		24	"	"	"	"	"	"	
Mercury	0.020		0.017	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1500		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	5900		24	"	"	"	"	"	"	
Manganese	410		0.47	"	"	"	"	"	"	
Molybdenum	1.1		0.94	"	"	"	"	"	"	
Sodium	220		24	"	"	"	"	"	"	
Nickel	54		1.4	"	"	"	"	"	"	
Lead	8.2		0.24	"	"	"	"	08/22/03	EPA 6020	
Antimony	ND		0.24	"	"	"	"	08/21/03	"	
Selenium	ND		0.47	"	"	"	"	08/22/03	"	
Titanium	610		0.94	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.14		0.094	"	"	"	"	08/30/03	EPA 6020	
Vanadium	47		0.47	"		"	"	08/18/03	EPA 6010B	
Zinc	68		9.4	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-15 (P308071-02) Soil	Sampled: 08/04	1/03 09:20	Received	: 08/04/03	14:17					
Silver	ND		0.34	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	14000		24	"	"	"	"	"	"	
Arsenic	4.4		0.49	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.9	"	1	"	"	08/18/03	EPA 6010B	
Barium	110		0.49	"	"	"	"	"	"	
Beryllium	0.28		0.049	"	"	"	"	"	"	
Calcium	3300		49	"	"	"	"	"	"	
Cadmium	ND		0.49	"	"	"	"	"	"	
Cobalt	5.6		0.34	"	"	"	"	"	"	
Chromium	20		0.49	"	"	"	"	"	"	
Hexavalent Chromium	ND		0.19	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	130		0.97	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	15000		24	"	"	"	"	"	"	
Mercury	0.071		0.018	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	880		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	2700		24	"	"	"	"	"	"	
Manganese	230		0.49	"	"	"	"	"	"	
Molybdenum	ND		0.97	"	"	"	"	"	"	
Sodium	250		24	"	"	"	"	"	"	
Nickel	37		1.5	"	"	"	"	"	"	
Lead	2.8		0.24	"	"	"	"	08/22/03	EPA 6020	
Antimony	ND		0.24	"	"	"	"	08/21/03	"	
Selenium	ND		0.49	"	"	"	"	08/22/03	"	
Titanium	370		0.97	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.11		0.097	"	"	"	"	08/22/03	EPA 6020	
Vanadium	33		0.49	"	"	"	"	08/18/03	EPA 6010B	
Zinc	200		9.7	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/0	4/03 12:05	Received	: 08/04/03	3 14:17					
Silver	ND		0.34	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	9900		24	"	"	"	"	"	"	
Arsenic	4.0		0.49	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.9	"	1	"	"	08/18/03	EPA 6010B	
Barium	78		0.49	"	"	"	"	"	"	
Beryllium	0.22		0.049	"	"	"	"	"	"	
Calcium	4000		49	"	"	"	"	"	"	
Cadmium	ND		0.49	"	"	"	"	"	"	
Cobalt	7.5		0.34	"	"	"	"	"	"	
Chromium	30		0.49	"	"	"	"	"	"	
Hexavalent Chromium	ND		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	75		0.97	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	16000		24	"	"	"	"	"	"	
Mercury	0.023		0.017	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1400		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	4200		24	"	"	"	"	"	"	
Manganese	230		0.49	"	"	"	"	"	"	
Molybdenum	ND		0.97	"	"	"	"	"	"	
Sodium	260		24	"	"	"	"	"	"	
Nickel	24		1.5	"	"	"	"	"	"	
Lead	5.6		0.24	"	"	"	"	08/22/03	EPA 6020	
Antimony	ND		0.24	"	"	"	"	08/21/03	"	
Selenium	ND		0.49	"	"	"	"	08/22/03	"	
Titanium	590		0.97	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.11		0.097	"	"	"	"	08/22/03	EPA 6020	
Vanadium	38		0.49	"	"	"	"	08/18/03	EPA 6010B	
Zinc	85		9.7	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-10 (P308071-04) Soil	Sampled: 08/04	1/03 12:30	Received	: 08/04/03	14:17					
Silver	ND		0.30	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	7800		21	"	"	"	"	"	"	
Arsenic	2.4		0.43	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.3	"	1	"	"	08/18/03	EPA 6010B	
Barium	53		0.43	"	"	"	"	"	"	
Beryllium	0.18		0.043	"	"	"	"	"	"	
Calcium	2000		43	"	"	"	"	"	"	
Cadmium	ND		0.43	"	"	"	"	"	"	
Cobalt	4.9		0.30	"	"	"	"	"	"	
Chromium	23		0.43	"	"	"	"	"	"	
Hexavalent Chromium	ND		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	31		0.85	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	12000		21	"	"	"	"	"	"	
Mercury	ND		0.018	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1000		110	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	2900		21	"	"	"	"	"	"	
Manganese	160		0.43	"	"	"	"	"	"	
Molybdenum	ND		0.85	"	"	"	"	"	"	
Sodium	230		21	"	"	"	"	"	"	
Nickel	16		1.3	"	"	"	"	"	"	
Lead	2.5		0.21	"	"	"	"	08/22/03	EPA 6020	
Antimony	ND		0.21	"	"	"	"	08/21/03	"	
Selenium	ND		0.43	"	"	"	"	08/22/03	"	
Titanium	360		0.85	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.091		0.085	"	"	"	"	08/22/03	EPA 6020	
Vanadium	28		0.43	"	"	"	"	08/18/03	EPA 6010B	
Zinc	51		8.5	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	R MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15E (P308071-05) Water	Sampled:	08/04/03 12:4	0 Recei	ved: 08/0	4/03 14:17	•				
Silver	ND		7.0	ug/l	1	3080149	08/12/03	08/12/03	EPA 6010B	_
Aluminum	ND		200	"	"	"	"	"	"	
Arsenic	3.7	2.4	5.0	"	"	"	"	08/27/03	EPA 6020	J
Boron	ND		40	"	"	"	"	08/12/03	EPA 6010B	
Barium	18		6.0	"	"	"	"	"	"	
Beryllium	ND		1.0	"	"	"	"	"	"	
Calcium	5900		1000	"	"	"	"	"	"	
Cadmium	ND	2.1	10	"	"	"	"	"	"	
Cobalt	ND		7.0	"	"	"	"	"	"	
Chromium	ND		8.0	"	"	"	"	"	"	
Hexavalent Chromium	ND		0.0050	mg/l	"	3080257	08/14/03	08/14/03	EPA 7196A	HT-04
Copper	15		6.0	ug/l	"	3080149	08/12/03	08/12/03	EPA 6010B	
Iron	ND		300	"	"	"	"	"	"	
Mercury	ND		0.20	"	"	3080171	08/12/03	08/12/03	EPA 7470A	
Potassium	930	570	2500	"	"	3080149	08/12/03	08/12/03	EPA 6010B	J
Magnesium	1700		500	"	"	"	"	"	"	
Manganese	22		10	"	"	"	"	"	"	
Molybdenum	ND		20	"	"	"	"	"	"	
Sodium	2500		500	"	"	"	"	"	"	
Nickel	8.4	6.5	30	"	"	"	"	"	"	J
Lead	4.8		2.0	"	"	"	"	08/26/03	EPA 6020	
Antimony	ND		3.0	"	"	"	"	08/25/03	"	
Selenium	ND		2.0	"	"	"	"	"	"	
Titanium	ND		10	"	"	"	"	08/12/03	EPA 6010B	
Thallium	ND		2.0	"	"	"	"	08/26/03	EPA 6020	
Vanadium	ND	1.8	10	"	"	"	"	08/12/03	EPA 6010B	
Zinc	430		20	"	"	"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15 (P308071-06) Soil	Sampled: 08/04	1/03 12:45	Received	08/04/03	14:17					
Silver	ND		0.31	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	10000		22	"	"	"	"	"	"	
Arsenic	3.0		0.45	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.5	"	1	"	"	08/18/03	EPA 6010B	
Barium	70		0.45	"	"	"	"	"	"	
Beryllium	0.24		0.045	"	"	"	"	"	"	
Calcium	1800		45	"	"	"	"	"	"	
Cadmium	ND		0.45	"	"	"	"	"	"	
Cobalt	5.5		0.31	"	"	"	"	"	"	
Chromium	30		0.45	"	"	"	"	"	"	
Hexavalent Chromium	0.39		0.20	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	24		0.89	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	15000		22	"	"	"	"	"	"	
Mercury	0.046		0.018	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1200		110	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	3300		22	"	"	"	"	"	"	
Manganese	190		0.45	"	"	"	"	"	"	
Molybdenum	ND		0.89	"	"	"	"	"	"	
Sodium	170		22	"	"	"	"	"	"	
Nickel	23		1.3	"	"	"	"	"	"	
Lead	3.4		0.22	"	"	"	"	08/23/03	EPA 6020	
Antimony	ND		0.22	"	"	"	"	08/21/03	"	
Selenium	ND		0.45	"	"	"	"	08/23/03	"	
Titanium	500		0.89	"	"	"	"	08/18/03	EPA 6010B	
Thallium	ND		0.089	"	"	"	"	08/23/03	EPA 6020	
Vanadium	37		0.45	"	"	"	"	08/18/03	EPA 6010B	
Zinc	46		8.9	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-25 (P308071-07) Soil	Sampled: 08/04	/03 13:10	Received:	08/04/03	14:17					
Silver	ND		0.34	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	29000		250	"	10	"	"	08/27/03	"	
Arsenic	8.6		0.49	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.9	"	1	"	"	08/18/03	EPA 6010B	
Barium	190		0.49	"	"	"	"	"	"	
Beryllium	0.64		0.049	"	"	"	"	"	"	
Calcium	2000		49	"	"	"	"	"	"	
Cadmium	ND		0.49	"	"	"	"	"	"	
Cobalt	16		0.34	"	"	"	"	"	"	
Chromium	54		0.49	"	"	"	"	"	"	
Hexavalent Chromium	0.88		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	59		0.98	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	28000		25	"	"	"	"	"	"	
Mercury	0.069		0.017	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1600		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	3800		25	"	"	"	"	"	"	
Manganese	590		0.49	"	"	"	"	"	"	
Molybdenum	ND		0.98	"	"	"	"	"	"	
Sodium	180		25	"	"	"	"	"	"	
Nickel	57		1.5	"	"	"	"	"	"	
Lead	9.2		0.25	"	"	"	"	08/23/03	EPA 6020	
Antimony	0.30		0.25	"	"	"	"	08/21/03	"	
Selenium	ND		0.49	"	"	"	"	08/23/03	"	
Titanium	610		0.98	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.14		0.098	"	"	"	"	08/23/03	EPA 6020	
Vanadium	70		0.49	"	"	"	"	08/18/03	EPA 6010B	
Zinc	120		9.8	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-30 (P308071-08) Soil	Sampled: 08/04	1/03 13:30	Received	: 08/04/03	14:17					
Silver	ND		0.34	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	24000		25	"	"	"	"	"	"	
Arsenic	3.9		0.49	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.9	"	1	"	"	08/18/03	EPA 6010B	
Barium	170		0.49	"	"	"	"	"	"	
Beryllium	0.47		0.049	"	"	"	"	"	"	
Calcium	2100		49	"	"	"	"	"	"	
Cadmium	ND		0.49	"	"	"	"	"	"	
Cobalt	16		0.34	"	"	"	"	"	"	
Chromium	48		0.49	"	"	"	"	"	"	
Hexavalent Chromium	ND		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	91		0.98	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	26000		25	"	"	"	"	"	"	
Mercury	0.13		0.016	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	2400		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	6900		25	"	"	"	"	"	"	
Manganese	320		0.49	"	"	"	"	"	"	
Molybdenum	ND		0.98	"	"	"	"	"	"	
Sodium	250		25	"	"	"	"	"	"	
Nickel	52		1.5	"	"	"	"	"	"	
Lead	7.0		0.25	"	"	"	"	08/23/03	EPA 6020	
Antimony	ND		0.25	"	"	"	"	08/21/03	"	
Selenium	ND		0.49	"	"	"	"	08/23/03	"	
Titanium	930		0.98	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.21		0.098	"	"	"	"	08/23/03	EPA 6020	
Vanadium	66		0.49	"	"	"	"	08/18/03	EPA 6010B	
Zinc	180		9.8	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06D-30 (P308071-09) Soil	Sampled: 08/	/04/03 13:30	Receive	d: 08/04/0	3 14:17					
Silver	ND		0.34	mg/kg	1	3080213	08/18/03	08/18/03	EPA 6010B	
Aluminum	16000		24	"	"	"	"	"	"	
Arsenic	3.2		0.48	"	5	"	"	08/26/03	EPA 6020	
Boron	ND		4.8	"	1	"	"	08/18/03	EPA 6010B	
Barium	110		0.48	"	"	"	"	"	"	
Beryllium	0.31		0.048	"	"	"	"	"	"	
Calcium	2100		48	"	"	"	"	"	"	
Cadmium	ND		0.48	"	"	"	"	"	"	
Cobalt	9.0		0.34	"	"	"	"	"	"	
Chromium	39		0.48	"	"	"	"	"	"	
Hexavalent Chromium	0.48		0.21	"	"	3080258	08/14/03	08/15/03	EPA 7196A	
Copper	46		0.96	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Iron	19000		24	"	"	"	"	"	"	
Mercury	0.040		0.017	"	"	3080172	08/13/03	08/14/03	EPA 7471A	
Potassium	1900		120	"	"	3080213	08/18/03	08/18/03	EPA 6010B	
Magnesium	5100		24	"	"	"	"	"	"	
Manganese	360		0.48	"	"	"	"	"	"	
Molybdenum	ND		0.96	"	"	"	"	"	"	
Sodium	240		24	"	"	"	"	"	"	
Nickel	35		1.4	"	"	"	"	"	"	
Lead	4.4		0.24	"	"	"	"	08/23/03	EPA 6020	
Antimony	ND		0.24	"	"	"	"	08/21/03	"	
Selenium	ND		0.48	"	"	"	"	08/23/03	"	
Titanium	810		0.96	"	"	"	"	08/18/03	EPA 6010B	
Thallium	0.16		0.096	"	"	"	"	08/23/03	EPA 6020	
Vanadium	51		0.48	"	"	"	"	08/18/03	EPA 6010B	
Zinc	69		9.6	"	10	"	"	08/27/03	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Tentatively Identified Compounds by GC/MS Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-2.5 (P308071-01) Soil	Sampled: 08/04	/03 09:05	Received	: 08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB07-15 (P308071-02) Soil	Sampled: 08/04/	03 09:20	Received:	08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/04	/03 12:05	Received	: 08/04/0	03 14:17					
Sulfur, mol. (S8)	800		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06-10 (P308071-04) Soil	Sampled: 08/04/	03 12:30	Received:	08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06-15E (P308071-05) Wa	ter Sampled: 08	3/04/03 12	:40 Recei	ved: 08/	04/03 14:17	1				
No TICs found	ND		10	ug/l	1	3080097	08/06/03	08/13/03	EPA 8270C	
32D-SB06-15 (P308071-06) Soil	Sampled: 08/04/	03 12:45	Received:	08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06-25 (P308071-07) Soil	Sampled: 08/04/	03 13:10	Received:	08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06-30 (P308071-08) Soil	Sampled: 08/04/	03 13:30	Received:	08/04/0	3 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
32D-SB06D-30 (P308071-09) Soil	Sampled: 08/0	4/03 13:30) Receive	d: 08/04	/03 14:17					
No TICs found	ND		300	ug/kg	1	3080253	08/14/03	08/21/03	EPA 8270C	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-2.5 (P308071-01) Soil	Sampled: 08/0	04/03 09:05	Received	: 08/04/0.	3 14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	170	9.3	330	"	"	"	"	"	"	J
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	1700	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	20	330	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	13	330	,,	"	"	,,	,,	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Di-n-octyl phthalate	mpled: 08/0	4/03 09:05								
	ND		Received	08/04/03	3 14:17					
		11	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Fluoranthene	ND	11	330	"	"	"	"	"	"	
Fluorene	ND	7.9	330	"	"	"	"	"	"	
Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachlorobutadiene	ND	17	330	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
Isophorone	ND	14	330	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
2-Methylphenol	ND	16	330	"	"	"	"	"	"	
4-Methylphenol	ND	11	330	"	"	"	"	"	"	
Naphthalene	ND	13	330	"	"	"	"	"	"	
2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
Nitrobenzene	ND	16	330	"	"	"	"	"	"	
2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	"	"	"	"	"	
Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Phenanthrene	ND	14	330	"	"	"	"	"	"	
Phenol	ND	12	330	"	"	"	"	"	"	
Pyrene	ND	12	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		43 %	11-12	0		"	"	"	"	
Surrogate: Phenol-d6		56 %	16-13	0		"	"	"	"	
Surrogate: Nitrobenzene-d5		53 %	16-12	6		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		65 %	28-13	4		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		86 %	51-14			"	"	"	"	
Surrogate: Terphenyl-d14		96 %	64-11			"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

			Dama :-::							
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-15 (P308071-02) Soil	Sampled: 08/04	4/03 09:20	Received	: 08/04/03	3 14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	1700	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	20	330	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	13	330	"	"	"	"	"	"	
,										

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

			Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB07-15 (P308071-02) Soil	Sampled: 08/04	4/03 09:20	Received:	08/04/03	3 14:17					
Di-n-octyl phthalate	ND	11	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Fluoranthene	ND	11	330	"	"	"	"	"	"	
Fluorene	ND	7.9	330	"	"	"	"	"	"	
Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachlorobutadiene	ND	17	330	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
Isophorone	ND	14	330	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
2-Methylphenol	ND	16	330	"	"	"	"	"	"	
4-Methylphenol	ND	11	330	"	"	"	"	"	"	
Naphthalene	ND	13	330	"	"	"	"	"	"	
2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
Nitrobenzene	ND	16	330	"	"	"	"	"	"	
2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	"	"	"	"	"	
Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Phenanthrene	ND	14	330	"	"	"	"	"	"	
Phenol	ND	12	330	"	"	"	"	"	"	
Pyrene	ND	12	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		63 %	11-12	20		"	"	"	"	
Surrogate: Phenol-d6		73 %	16-13	80		"	"	"	"	
Surrogate: Nitrobenzene-d5		76 %	16-12	26		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		80 %	28-13	34		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		92 %	51-14	14		"	"	"	"	
Surrogate: Terphenyl-d14		110 %	64-11	9		"	"	"	"	
5 1 J										



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

				•						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/0	4/03 12:05	Received	1: 08/04/0	3 14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND ND	10	1700	"	"	"	"	"	,,	
2,4-Dinitrotoluene	ND	20	330	"	"	"	,,	"	"	
2,6-Dinitrotoluene	ND ND	13	330	"	"	"	,,	"	"	
2,0-Dillitotolucite	ND	13	330							

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/0	4/03 12:05	Received	: 08/04/0	3 14:17					
Di-n-octyl phthalate	ND	11	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Fluoranthene	ND	11	330	"	"	"	"	"	"	
Fluorene	ND	7.9	330	"	"	"	"	"	"	
Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachlorobutadiene	ND	17	330	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
Isophorone	ND	14	330	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
2-Methylphenol	ND	16	330	"	"	"	"	"	"	
4-Methylphenol	ND	11	330	"	"	"	"	"	"	
Naphthalene	ND	13	330	"	"	"	"	"	"	
2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
Nitrobenzene	ND	16	330	"	"	"	"	"	"	
2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	"	"	"	"	"	
Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Phenanthrene	ND	14	330	"	"	"	"	"	"	
Phenol	ND	12	330	"	"	"	"	"	"	
Pyrene	ND	12	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		60 %	11-12	20		"	"	"	"	
Surrogate: Phenol-d6		71 %	16-13	80		"	"	"	"	
Surrogate: Nitrobenzene-d5		73 %	16-12	26		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		81 %	28-13	34		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		83 %	51-14	14		"	"	"	"	
Surrogate: Terphenyl-d14		104 %	64-11	9		"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

			Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-10 (P308071-04) Soil	Sampled: 08/04	4/03 12:30	Received	08/04/03	14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700			"	"	"	"	
2,4-Dinitrophenol	ND	10	1700			"	"	"	"	
2,4-Dinitrotoluene	ND	20	330	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND ND	13	330	"	,,	"	"	"	"	
2,0 Dimuotoruche	1112	1.5	330							

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Subsection Company C	Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluoranthene ND	32D-SB06-10 (P308071-04) Soil	Sampled: 08/04	4/03 12:30	Received:	08/04/03	3 14:17					
Fluorene ND 17 330							3080253			EPA 8270C	
Hexachlorobenzene ND 15 330 " " " " " " " " " " " " Hexachlorobenzene ND 17 330 " " " " " " " " " " " " " " " " " "	Fluoranthene	ND		330							
Hexachlorobutadiene ND		ND					"			"	
Hexachlorocyclopentadiene ND 10 330 " " " " " " " " " " " " " " " " "			15							"	
Indeno (1,2,3-cd) pyrene ND 17 330 "											
Indeno (1,2,3-cd) pyrene ND					"	"	"	"	"	"	
Isophorone			17		"	"	"	"	"	"	
Septembro No. 10 330	Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
2-Methylphenol ND 16 330 "	•	ND	14	330	"	"	"	"	"	"	
4-Methylphenol ND 11 330 """"""""""""""""""""""""""""""""""""					"	"	"	"	"	"	
Naphthalene ND 13 330 "	2-Methylphenol	ND	16	330	"	"	"	"	"	"	
2-Nitroaniline ND 17 1700 "	4-Methylphenol	ND	11	330	"	"	"	"	"	"	
3-Nitroaniline ND 18 1700 " " " " " " " " " " " " " " " " " "	Naphthalene	ND	13	330	"	"	"	"	"	"	
4-Nitrobenzene ND 22 1700 "		ND	17		"	"	"	"	"	"	
Nitrobenzene ND 16 330 "	3-Nitroaniline	ND			"	"	"	"	"	"	
2-Nitrophenol ND 14 330 " " " " " " " " " " " " " " " " " "	4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
4-Nitrophenol ND 23 1700 " " " " " " " " " " N-Nitrosodimethylamine ND 16 330 " " " " " " " " " " " " " " " " " "	Nitrobenzene	ND	16	330	"	"	"	"	"	"	
N-Nitrosodimethylamine ND 16 330 " " " " " " " " " " " " " " " " " "	2-Nitrophenol				"	"	"	"	"	"	
N-Nitrosodiphenylamine ND 17 330 " </td <td></td> <td>ND</td> <td>23</td> <td>1700</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>		ND	23	1700	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine ND 15 330 "	N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
Pentachlorophenol ND 12 1700 "	N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
Phenanthrene ND 14 330 "	N-Nitrosodi-n-propylamine	ND		330	"	"	"	"	"	"	
Phenol ND 12 330 "	Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Pyrene ND 12 330 "	Phenanthrene	ND	14	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene ND 15 330 "	Phenol	ND	12	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol ND 14 330 "<	Pyrene	ND	12	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol ND 9.4 330 " " " " " " " " Surrogate: 2-Fluorophenol 61 % 11-120 " " " " " " "	1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol 61 % 11-120 " " " "	2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
	2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Cumpo at a Dhon al 46 70.0/ 16.120 " " " "	Surrogate: 2-Fluorophenol		61 %	11-12	20		"	"	"	"	
Surrogaie: rnenoi-ao /0 % 10-150 " " " " "	Surrogate: Phenol-d6		70 %	16-13	30		"	"	"	"	
Surrogate: Nitrobenzene-d5 71 % 16-126 " " " " "	Surrogate: Nitrobenzene-d5		71 %	16-12	26		"	"	"	"	
Surrogate: 2-Fluorobiphenyl 76 % 28-134 " " " "	Surrogate: 2-Fluorobiphenyl		76 %	28-13	34		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " "			83 %	51-14	14		"	"	"	"	
Surrogate: Terphenyl-d14 100 % 64-119 " " " " "				64-11	19		"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

Analyte	Result	Re _l MDL	porting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15E (P308071-05) Water	Sampled:	08/04/03 12:40	Recei	ved: 08/0	4/03 14:17					
Acenaphthene	ND	1.3	11	ug/l	1	3080097	08/06/03	08/13/03	EPA 8270C	
Acenaphthylene	ND	1.5	11	"	"	"	"	"	"	
Anthracene	ND	0.67	11	"	"	"	"	"	"	
Azobenzene	ND	0.70	22	"	"	"	"	"	"	
Benzidine	ND	3.5	56	"	"	"	"	"	"	
Benzoic acid	ND	4.3	56	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.49	11	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	1.3	11	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.71	11	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.97	11	"	"	"	"	"	"	
Benzyl alcohol	ND	4.3	22	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1.2	11	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1.7	11	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1.7	11	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	3.2	11	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.78	11	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	3.0	11	"	"	"	"	"	"	
4-Chloroaniline	ND	0.61	22	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	2.6	22	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1.6	11	"	"	"	"	"	"	
2-Chlorophenol	ND	0.34	11	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1.1	11	"	"	"	"	"	"	
Chrysene	ND	0.50	11	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.61	11	"	"	"	"	"	"	
Dibenzofuran	ND	1.2	11	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	1.2	11	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	11	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	11	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.9	11	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	3.2	22	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.52	11	"	"	"	"	"	"	
Diethyl phthalate	ND	0.47	11	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1.5	11	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.62	11	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	3.8	56	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	2.6	56	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.91	11	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.84	11	"	,,	,,	,,	,,	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Analyte	Result	Re _l MDL	porting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15E (P308071-05) Water	Sampled:	08/04/03 12:40	Recei	ved: 08/0	4/03 14:17	·				
Di-n-octyl phthalate	ND	0.90	11	ug/l	1	3080097	08/06/03	08/13/03	EPA 8270C	
Fluoranthene	ND	0.49	11	"	"	"	"	"	"	
Fluorene	ND	1.1	11	"	"	"	"	"	"	
Hexachlorobenzene	ND	0.88	11	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.6	11	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.34	11	"	"	"	"	"	"	
Hexachloroethane	ND	1.9	11	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.68	11	"	"	"	"	"	"	
Isophorone	ND	0.79	11	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1.6	11	"	"	"	"	"	"	
2-Methylphenol	ND	3.8	11	"	"	"	"	"	"	
4-Methylphenol	ND	3.3	11	"	"	"	"	"	"	
Naphthalene	ND	1.8	11	"	"	"	"	"	"	
2-Nitroaniline	ND	0.77	56	"	"	"	"	"	"	
3-Nitroaniline	ND	0.60	56	"	"	"	"	"	"	
4-Nitroaniline	ND	0.68	56	"	"	"	"	"	"	
Nitrobenzene	ND	1.5	11	"	"	"	"	"	"	
2-Nitrophenol	ND	0.47	11	"	"	"	"	"	"	
4-Nitrophenol	ND	0.57	56	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1.6	22	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	4.3	11	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.64	11	"	"	"	"	"	"	
Pentachlorophenol	ND	3.4	56	"	"	"	"	"	"	
Phenanthrene	ND	0.62	11	"	"	"	"	"	"	
Phenol	ND	0.53	11	"	"	"	"	"	"	
Pyrene	ND	0.31	11	"	"	"	"	"	"	
Pyridine	ND	4.2	11	"		"		"	"	
1,2,4-Trichlorobenzene	ND	1.9	11	"		"	"	"	"	
2,4,5-Trichlorophenol	ND	0.68	11	"	,,	"	,,	"	"	
2,4,6-Trichlorophenol	ND	0.34	11	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		65 %	15-10)3		"	"	"	"	
Surrogate: Phenol-d6		78 %	18-11			"	"	"	"	
Surrogate: Nitrobenzene-d5		88 %	39-10			"	"	"	"	
Surrogate: 2-Fluorobiphenyl		90 %	40-12			"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		101 %	11-14			"	"	"	"	
•		101 % 101 %	56-13			"	"	,,	"	
Surrogate: Terphenyl-d14		101 %	30-13	9		**		**	**	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15 (P308071-06) Soil	Sampled: 08/0	4/03 12:45	Received	08/04/03	14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	46	14	330	"	"	,,	"	"	"	J
2,4-Dimethylphenol	ND	36	330	"	"	"	,,	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	,,	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	1700	"	"	"	"	"	,,	
2,4-Dinitrotoluene	ND	20	330		"	,,		,,	"	
2,6-Dinitrotoluene	ND ND	13	330	,,	"	,,	,,	,,	,,	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

	r .		Reporting		D .1.:	D	ъ .			37
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-15 (P308071-06) Soil	Sampled: 08/04	4/03 12:45	Received:	08/04/03	3 14:17					
Di-n-octyl phthalate	ND	11	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Fluoranthene	ND	11	330	"	"	"	"	"	"	
Fluorene	ND	7.9	330	"	"	"	"	"	"	
Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachlorobutadiene	ND	17	330	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
Isophorone	ND	14	330	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
2-Methylphenol	ND	16	330	"	"	"	"	"	"	
4-Methylphenol	ND	11	330	"	"	"	"	"	"	
Naphthalene	ND	13	330	"	"	"	"	"	"	
2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
Nitrobenzene	ND	16	330	"	"	"	"	"	"	
2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	"	"	"	"	"	
Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Phenanthrene	ND	14	330	"	"	"	"	"	"	
Phenol	ND	12	330	"	"	"	"	"	"	
Pyrene	ND	12	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		50 %	11-12	0		"	"	"	"	
Surrogate: Phenol-d6		57 %	16-13	0		"	"	"	"	
Surrogate: Nitrobenzene-d5		61 %	16-12			"	"	"	"	
Surrogate: 2-Fluorobiphenyl		65 %	28-13			"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		75 %	51-14			"	"	"	"	
Surrogate: Terphenyl-d14		106 %	64-11			"	"	"	"	
Surroguie. 1erpnenyi-u14		100 /0	04-11	7						



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

			Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-25 (P308071-07) Soil	Sampled: 08/04	4/03 13:10	Received	08/04/03	14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	1700	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	20	330	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	13	330	"	"	"	"	"	"	
_,	1,12	1.5	220							

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Sabo Sabo Samplet Samplet Samplet Sabo Samplet Sabo Sa	Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluoranthene ND	32D-SB06-25 (P308071-07) Soil	Sampled: 08/04	1/03 13:10	Received:	08/04/03	14:17					
Fluorene ND 7.9 330 " " " " " " " " " " " " " " " " " "	Di-n-octyl phthalate	ND	11			1	3080253	08/14/03	08/22/03	EPA 8270C	
Hexachlorobenzene ND 15 330 " " " " " " " " Hexachlorobenzene ND 17 330 " " " " " " " " "	Fluoranthene	ND	11	330	"	"	"	"	"	"	
Hexachlorobutadiene ND 17 330 " " " " " " " " Hexachlorocyclopentadiene ND 10 330 " " " " " " " " "	Fluorene	ND			"	"	"	"	"	"	
Hexachlorocyclopentatione ND 10 330 " " " " " " " " " " " " " " " " "	Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachloroethane ND 17 330 " " " " " " " " "	Hexachlorobutadiene	ND	17		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene ND	Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Isophorone ND	Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Sepheron Sepheron	Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
2-Methylphenol ND 16 330 "	Isophorone	ND	14	330	"	"	"	"	"	"	
4-Methylphenol ND 11 330 "	2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
Naphthalene ND 13 330 """"""""""""""""""""""""""""""""""""	2-Methylphenol	ND	16	330	"	"	"	"	"	"	
2-Nitroaniline ND 17 1700 " " " " " " " " " " " " " " " " " "	4-Methylphenol	ND	11	330	"	"	"	"	"	"	
3-Nitroaniline	Naphthalene	ND	13	330	"	"	"	"	"	"	
4-Nitroaniline ND 22 1700 "	2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
Nitrobenzene ND 16 330 "	3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
2-Nitrophenol ND 14 330 "	4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
4-Nitrophenol ND 23 1700 "	Nitrobenzene	ND	16	330	"	"	"	"	"	"	
N-Nitrosodimethylamine ND 16 330 " " " " " " " " " " " " " N-Nitrosodiphenylamine ND 17 330 " " " " " " " " " " " " " " " " " "	2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
N-Nitrosodimethylamine ND 16 330 " </td <td>4-Nitrophenol</td> <td>ND</td> <td>23</td> <td>1700</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td>"</td> <td></td>	4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine ND 15 330 "		ND	16	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine ND 15 330 "	N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
Pentachlorophenol ND 12 1700 "		ND	15	330	"	"	"	"	"	"	
Phenanthrene ND 14 330 "		ND	12	1700	"	"	"	"	"	"	
Pyrene ND 12 330 "		ND	14	330	"	"	"	"	"	"	
Pyrene ND 12 330 "	Phenol	ND	12	330	"	"	"	"	"	"	
	Pyrene	ND	12		"	"	"	"	"	"	
	1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
, , , , , , , , , , , , , , , , , , ,					"	"	"	"	"	"	
2,4,6-Trichlorophenol ND 9.4 330 " " " " " " "	•		9.4		"	"	"	"	"	"	
Surrogate: 2-Fluorophenol 55 % 11-120 " " " "	Surrogate: 2-Fluorophenol		55 %	11-12	20		"	"	"	"	
Surrogate: Phenol-d6 68 % 16-130 " " " "	Surrogate: Phenol-d6		68 %	16-13	80		"	"	"	"	
Surrogate: Nitrobenzene-d5 78 % 16-126 " " " "	Surrogate: Nitrobenzene-d5		78 %	16-12	26		"	"	"	"	
Surrogate: 2-Fluorobiphenyl 80 % 28-134 " " " "	_		80 %	28-13	34		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol 72 % 51-144 " " " "							"	"	"	"	
Surrogate: Terphenyl-d14 105 % 64-119 " " " "	=						"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

				•						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-30 (P308071-08) Soil	Sampled: 08/04	4/03 13:30	Received	: 08/04/03	3 14:17					
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/22/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND ND	15	330	"	"	"	"	,,	"	
Diethyl phthalate	ND ND	13	330	"	"	"	,,	"	"	
2,4-Dimethylphenol	ND ND	36	330	"	,,	"	,,	"	"	
Dimethyl phthalate	ND ND	30 11	330	,,	,,	,,	,,	"	"	
4,6-Dinitro-2-methylphenol	ND ND	17	1700	,,	"	"	,,	"	"	
2,4-Dinitrophenol	ND ND	17	1700	"	"	"	"	"	"	
_				"	,,	"	,,	,,	"	
2,4-Dinitrotoluene	ND	20	330	"			.,	.,		
2,6-Dinitrotoluene	ND	13	330	.,	"	"		"		

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Display	Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Fluoranthene ND 11 330 " " " " " " " " Fluorene ND 7.9 3300 " " " " " " " " " " " " " " " " "	32D-SB06-30 (P308071-08) Soil	Sampled: 08/04	1/03 13:30	Received:	08/04/03	3 14:17					
Fluorene ND 7.9 330	Di-n-octyl phthalate	ND	11	330		1	3080253	08/14/03	08/22/03	EPA 8270C	
Hexachlorobenzene	Fluoranthene	ND		330			"				
Hexachlorobutadiene ND		ND					"			"	
Hexachlorocyclopentadiene ND 10 330 " " " " " " " " " " " " " " " " "			15							"	
Hexachloroethane											
Indeno (1,2,3-cd) pyrene ND					"	"	"	"	"	"	
Isophorone			17		"	"	"	"	"	"	
Solution No. 14 Solution No. N	Indeno (1,2,3-cd) pyrene		11				"			"	
2-Methylphenol ND 16 330 " " " " " " " " " " " " " " " " " "	Isophorone	ND	14	330	"	"	"	"	"	"	
4-Methylphenol ND 11 330 "							"			"	
Appthalene ND 13 330	2-Methylphenol	ND	16	330	"	"	"	"	"	"	
2-Nitroaniline	4-Methylphenol	ND	11	330	"	"	"	"	"	"	
No. 1700	Naphthalene	ND	13	330	"	"	"	"	"	"	
4-Nitrobaniline ND 22 1700 " " " " " " " " " " " " " " " " " "	2-Nitroaniline	ND	17		"	"	"	"	"	"	
Nitrobenzene	3-Nitroaniline	ND			"	"	"	"	"	"	
2-Nitrophenol ND 14 330 " " " " " " " " " " " " " " " " " "	4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
4-Nitrophenol ND 23 1700 " " " " " " " " " " N-Nitrosodimethylamine ND 16 330 " " " " " " " " " " " " " " " " N-Nitrosodimethylamine ND 17 330 " " " " " " " " " " " " " " " " " "	Nitrobenzene	ND	16	330	"	"	"	"	"	"	
N-Nitrosodimethylamine ND 16 330 """"""""""""""""""""""""""""""""""	2-Nitrophenol				"	"	"	"	"	"	
N-Nitrosodiphenylamine ND 17 330 """"""""""""""""""""""""""""""""""	4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine ND 15 330 " " " " " " " " " " " " " " " " " "	N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
Pentachlorophenol ND 12 1700 "	N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
Phenanthrene ND 14 330 "	N-Nitrosodi-n-propylamine	ND		330	"	"	"	"	"	"	
Phenol ND 12 330 "	Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Pyrene ND 12 330 " " " " " " " " " " 1,2,4-Trichlorobenzene ND 15 330 " " " " " " " " " " " " " " 1,2,4,5-Trichlorophenol ND 14 330 " " " " " " " " " " " " " " " " " "	Phenanthrene	ND	14	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene 1,2,4-Trichlorophenol	Phenol	ND	12	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol ND 14 330 "<	Pyrene	ND	12	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol ND 9.4 330 "	1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol 45 % 11-120 " " " " " Surrogate: Phenol-d6 54 % 16-130 " " " " " Surrogate: Nitrobenzene-d5 52 % 16-126 " " " " " Surrogate: 2-Fluorobiphenyl 57 % 28-134 " " " " " " Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " " "	2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
Surrogate: Phenol-d6 54 % 16-130 " " " " " " Surrogate: Nitrobenzene-d5 52 % 16-126 " " " " " " " Surrogate: 2-Fluorobiphenyl 57 % 28-134 " " " " " " " " Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " " " " "	2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5 52 % 16-126 " " " " " " " Surrogate: 2-Fluorobiphenyl 57 % 28-134 " " " " " " Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " " " " "	Surrogate: 2-Fluorophenol		45 %	11-12	20		"	"	"	"	
Surrogate: 2-Fluorobiphenyl 57 % 28-134 " " " " " Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " " "	Surrogate: Phenol-d6		54 %	16-13	30		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " "	Surrogate: Nitrobenzene-d5		52 %	16-12	26		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol 83 % 51-144 " " " "	Surrogate: 2-Fluorobiphenyl		57 %	28-13	34		"	"	"	"	
	Surrogate: 2,4,6-Tribromophenol		83 %	51-14	14		"	"	"	"	
Surrogate: 1erpnenyt-a14	Surrogate: Terphenyl-d14		99 %	64-11	19		"	"	"	"	



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
,	Sampled: 08					-		<u> </u>		
Acenaphthene	ND	8.7	330	ug/kg	1	3080253	08/14/03	08/21/03	EPA 8270C	
Acenaphthylene	ND	7.6	330	"	"	"	"	"	"	
Anthracene	ND	14	330	"	"	"	"	"	"	
Azobenzene	ND	20	330	"	"	"	"	"	"	
Benzidine	ND	1700	1700	"	"	"	"	"	"	
Benzoic acid	ND	2.7	1700	"	"	"	"	"	"	
Benzo (a) anthracene	ND	7.6	330	"	"	"	"	"	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	330	"	"	"	"	"	"	
Benzyl alcohol	ND	11	660	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	15	330	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	11	330	"	"	"	"	"	"	
4-Chloroaniline	ND	58	660	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	11	660	"	"	"	"	"	"	
2-Chloronaphthalene	ND	9.9	330	"	"	"	"	"	"	
2-Chlorophenol	ND	16	330	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	"	"	"	"	"	
Chrysene	ND	11	330	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	18	330	"	"	"	"	"	"	
Dibenzofuran	ND	9.6	330	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	12	330	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	16	330	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	14	330	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	15	330	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	44	660	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	15	330	"	"	"	"	"	"	
Diethyl phthalate	ND	14	330	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	36	330	"	"	"	"	"	"	
Dimethyl phthalate	ND	11	330	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	1700	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	20	330	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	13	330	"	"	,,	,,	,,	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

		т	Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06D-30 (P308071-09) Soil	Sampled: 08	/04/03 13:30	Receive	d: 08/04/0	03 14:17					
Di-n-octyl phthalate	ND	11	330	ug/kg	1	3080253	08/14/03	08/21/03	EPA 8270C	
Fluoranthene	ND	11	330	"	"	"	"	"	"	
Fluorene	ND	7.9	330	"	"	"	"	"	"	
Hexachlorobenzene	ND	15	330	"	"	"	"	"	"	
Hexachlorobutadiene	ND	17	330	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	10	330	"	"	"	"	"	"	
Hexachloroethane	ND	17	330	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	"	"	"	"	"	
Isophorone	ND	14	330	"	"	"	"	"	"	
2-Methylnaphthalene	ND	10	330	"	"	"	"	"	"	
2-Methylphenol	ND	16	330	"	"	"	"	"	"	
4-Methylphenol	ND	11	330	"	"	"	"	"	"	
Naphthalene	ND	13	330	"	"	"	"	"	"	
2-Nitroaniline	ND	17	1700	"	"	"	"	"	"	
3-Nitroaniline	ND	18	1700	"	"	"	"	"	"	
4-Nitroaniline	ND	22	1700	"	"	"	"	"	"	
Nitrobenzene	ND	16	330	"	"	"	"	"	"	
2-Nitrophenol	ND	14	330	"	"	"	"	"	"	
4-Nitrophenol	ND	23	1700	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	16	330	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	17	330	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	"	"	"	"	"	
Pentachlorophenol	ND	12	1700	"	"	"	"	"	"	
Phenanthrene	ND	14	330	"	"	"	"	"	"	
Phenol	ND	12	330	"	"	"	"	"	"	
Pyrene	ND	12	330	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	15	330	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	14	330	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		67 %	11-12	20		"	"	"	"	
Surrogate: Phenol-d6		77 %	16-13	90		"	"	"	"	
Surrogate: Nitrobenzene-d5		80 %	16-12	<u>26</u>		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		82 %	28-13			"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		92 %	51-14			"	"	"	"	
Surrogate: Terphenyl-d14		110 %	64-11			"	"	"	"	
		110 /0	5, 11	-						



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Petaluma

			Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
32D-SB06-2.5 (P308071-03) Soil	Sampled: 08/04/	/03 12:05	Receive	d: 08/04/03	3 14:17					
pH	6.43		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01
32D-SB06-10 (P308071-04) Soil	Sampled: 08/04/	03 12:30	Received	: 08/04/03	14:17					
pH	7.17		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01
32D-SB06-15E (P308071-05) War	ter Sampled: 08	3/04/03 12	:40 Rece	ived: 08/0	4/03 14:17	1				
pH	7.00		2.00	pH Units	1	3080162	08/08/03	08/08/03	EPA 150.1	HT-01
32D-SB06-15 (P308071-06) Soil	Sampled: 08/04/	03 12:45	Received	: 08/04/03	14:17					
pH	6.92		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01
32D-SB06-25 (P308071-07) Soil	Sampled: 08/04/	03 13:10	Received	: 08/04/03	14:17					
pН	6.58		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01
32D-SB06-30 (P308071-08) Soil	Sampled: 08/04/	03 13:30	Received	: 08/04/03	14:17					
рН	6.19		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01
32D-SB06D-30 (P308071-09) Soil	Sampled: 08/04	4/03 13:30	Receive	ed: 08/04/0	3 14:17					
pH	6.65		2.00	pH Units	1	3080163	08/08/03	08/08/03	EPA 9045C	HT-01



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015B - Quality Control Sequoia Analytical - Petaluma

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3080174 - EPA 3510C										
Blank (3080174-BLK1)				Prepared:	08/11/03	Analyzed	1: 08/18/03			
Diesel Range Organics (C10-C28)	ND	0.050	mg/l							
Surrogate: Octacosane	0.0466		"	0.0500		93	54-141			
Laboratory Control Sample (308017	4-BS1)			Prepared:	08/11/03	Analyzed	1: 08/18/03			
Diesel Range Organics (C10-C28)	0.698	0.050	mg/l	1.00		70	49-102			
Surrogate: Octacosane	0.0479		"	0.0500		96	54-141			
Laboratory Control Sample Dup (303	80174-BSD1	.)		Prepared:	08/11/03	Analyzed	1: 08/18/03			
Diesel Range Organics (C10-C28)	0.742	0.050	mg/l	1.00		74	49-102	6	20	
Surrogate: Octacosane	0.0518		"	0.0500		104	54-141			
Batch 3080254 - CA LUFT - orb s	shaker									
Blank (3080254-BLK1)				Prepared:	08/14/03	Analyzed	1: 08/22/03			
Diesel Range Organics (C10-C28)	ND	5.0	mg/kg							
Surrogate: Octacosane	1.47		"	1.67		88	52-133			
Laboratory Control Sample (308025 4	4-BS1)			Prepared:	08/14/03	Analyzed	1: 08/22/03			
Diesel Range Organics (C10-C28)	27.8	5.0	mg/kg	33.3		83	62-103			
Surrogate: Octacosane	1.46		"	1.67		87	52-133			
Matrix Spike (3080254-MS1)	Sou	rce: P308047-09		Prepared:	08/14/03	Analyzed	1: 08/22/03			
Diesel Range Organics (C10-C28)	31.5	5.0	mg/kg	33.3	1.9	89	62-103			
Surrogate: Octacosane	1.87		"	1.67		112	52-133			
Matrix Spike Dup (3080254-MSD1)	Sou	rce: P308047-09		Prepared:	08/14/03	Analyzed	1: 08/23/03			
Diesel Range Organics (C10-C28)	55.5	5.0	mg/kg	33.3	1.9	161	62-103	55	35	QM-0
Surrogate: Octacosane	2.47		"	1.67		148	52-133			S-02



Batch 3080149 - EPA 3010A

Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (3080149-BLK1)					Prepared & Aı	nalyzed: 08/12/	03	
Aluminum	ND		200	ug/l				
Antimony	ND		3.0	"				
Arsenic	2.87	2.4	5.0	"				
Barium	ND		6.0	"				
Beryllium	ND		1.0	"				
Boron	ND		40	"				
Cadmium	ND	2.1	10	"				
Calcium	ND		1000	"				
Chromium	ND		8.0	"				
Cobalt	ND		7.0	"				
Copper	ND		6.0	"				
Iron	ND		300	"				
Lead	ND		2.0	"				
Magnesium	ND		500	"				
Manganese	ND		10	"				
Molybdenum	ND		20	"				
Nickel	ND	6.5	30	"				
Potassium	ND	570	2500	"				
Selenium	ND		2.0	"				
Silver	ND		7.0	"				
Sodium	ND		500	"				
Thallium	ND		2.0	"				
Titanium	ND		10	"				
Vanadium	ND	1.8	10	"				
Zinc	ND		20	"				
Laboratory Control Sample (3080149-BS1)				Prepared & Aı	nalyzed: 08/12/	03	
Aluminum	5030		200	ug/l	5000	101	80-120	
Antimony	521		3.0	"	500	104	80-120	
Arsenic	490	2.4	5.0	"	500	98	80-120	
Barium	511		6.0	"	500	102	80-120	
Beryllium	53.2		1.0	"	50.0	106	80-120	
Boron	519		40	"	500	104	80-120	
Cadmium	54.3	2.1	10	"	50.0	109	80-120	
Calcium	5510		1000	"	5000	110	80-120	
Chromium	535		8.0	"	500	107	80-120	
Cobalt	512		7.0	"	500	102	80-120	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080149 - EPA 3010A											
Laboratory Control Sample (3080149-BS1)											
Copper	502		6.0	ug/l	500	& Analyze	100	80-120			
Iron	5500		300	"	5000		110	80-120			
Lead	576		2.0	"	500		115	80-120			
Magnesium	5150		500	"	5000		103	80-120			
Manganese	521		10	"	500		104	80-120			
Molybdenum	524		20	"	500		105	80-120			
Nickel	531	6.5	30	"	500		106	80-120			
Potassium	4890	570	2500	"	5000		98	80-120			
Selenium	494		2.0	"	500		99	80-120			
Silver	48.8		7.0	"	50.0		98	80-120			
Sodium	5160		500	"	5000		103	80-120			
Thallium	597		2.0	"	500		119	80-120			
Titanium	505		10	"	500		101	80-120			
Vanadium	526	1.8	10	"	500		105	80-120			
Zinc	487		20	"	500		97	80-120			
Duplicate (3080149-DUP1)	Sou	Source: P308047-07			Prepared a	& Analyze	d: 08/12	/03			
Aluminum	ND		1000	ug/l		41				10	
Antimony	ND		15	"		0.079				10	
Arsenic	ND	12	25	"		3.7				10	
Barium	13.8		50	"		13			6	10	
Beryllium	ND		5.0	"		ND				10	
Boron	ND		500	"		ND				10	
Cadmium	ND	10	50	"		ND				10	
Calcium	4210		5000	"		4200			0.2	10	
Chromium	ND		50	"		ND				10	
Cobalt	ND		35	"		ND				10	
Copper	ND		50	"		12				10	
Iron	ND		1500	"		210				10	
Lead	ND		10	"		1.5				10	
Magnesium	1210		2500	"		1200			0.8	10	
Manganese	18.9		50	"		20			6	10	
Molybdenum	ND		100	"		ND				10	
Nickel	ND	32	150	"		ND				10	
Potassium	ND	2900	12000	"		630				10	
Selenium	ND		10	"		0.22				10	
Silver	ND		35	"		ND				10	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD		
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 3080149 - EPA	3010A
---------------------	-------

Duplicate (3080149-DUP1)	Sour	ce: P30804	17-07		Prepared of	& Analyze	d: 08/12	03		
Sodium	1740		2500	ug/l	-	1600			8	10
Гhallium	ND		10	"		ND				10
Гitanium	9.30		50	"		2.1				10
Vanadium	ND	9.1	50	"		ND				10
Zinc	247		100	"		240			3	10
Matrix Spike (3080149-MS1)	Sour	ce: P30804	17-07		Prepared of	& Analyze	d: 08/12/	03		
Aluminum	5050		200	ug/l	5000	41	100	80-120		
Antimony	471		3.0	"	500	0.079	94	80-120		
Arsenic	480	2.4	5.0	"	500	3.7	95	80-120		
Barium	521		6.0	"	500	13	102	80-120		
Beryllium	53.0		1.0	"	50.0	ND	106	80-120		
Boron	519		40	"	500	ND	104	80-120		
Cadmium	52.1	2.1	10	"	50.0	ND	104	80-120		
Calcium	9540		1000	"	5000	4200	107	80-120		
Chromium	532		8.0	"	500	ND	106	80-120		
Cobalt	503		7.0	"	500	ND	101	80-120		
Copper	515		6.0	"	500	12	101	80-120		
ron	5700		300	"	5000	210	110	80-120		
Lead	557		2.0	"	500	1.5	111	80-120		
Magnesium	6290		500	"	5000	1200	102	80-120		
Manganese	539		10	"	500	20	104	80-120		
Molybdenum	516		20	"	500	ND	103	80-120		
Nickel	542	6.5	30	"	500	ND	108	80-120		
Potassium	5470	570	2500	"	5000	630	97	80-120		
Selenium	423		2.0	"	500	0.22	85	80-120		
Silver	49.0		7.0	"	50.0	ND	98	80-120		
Sodium	6650		500	"	5000	1600	101	80-120		
Гhallium	571		2.0	"	500	ND	114	80-120		
Гitanium	498		10	"	500	2.1	99	80-120		
Vanadium	524	1.8	10	"	500	ND	105	80-120		
Zinc	718		20	"	500	240	96	80-120		



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Matrix Spike Dup (3080149-MSD1)	Sou	rce: P30804	17-07		Prepared	& Analyze	d: 08/12/	/03		
Aluminum	5160		200	ug/l	5000	41	102	80-120	2	20
Antimony	535		3.0	"	500	0.079	107	80-120	13	20
Arsenic	498	2.4	5.0	"	500	3.7	99	80-120	4	20
Barium	535		6.0	"	500	13	104	80-120	3	20
Beryllium	53.9		1.0	"	50.0	ND	108	80-120	2	20
Boron	525		40	"	500	ND	105	80-120	1	20
Cadmium	57.9	2.1	10	"	50.0	ND	116	80-120	11	20
Calcium	9690		1000	"	5000	4200	110	80-120	2	20
Chromium	541		8.0	"	500	ND	108	80-120	2	20
Cobalt	514		7.0	"	500	ND	103	80-120	2	20
Copper	527		6.0	"	500	12	103	80-120	2	20
ron	5810		300	"	5000	210	112	80-120	2	20
Lead	591		2.0	"	500	1.5	118	80-120	6	20
Magnesium	6450		500	"	5000	1200	105	80-120	3	20
Manganese	550		10	"	500	20	106	80-120	2	20
Molybdenum	535		20	"	500	ND	107	80-120	4	20
Nickel	556	6.5	30	"	500	ND	111	80-120	3	20
Potassium	5610	570	2500	"	5000	630	100	80-120	3	20
Selenium	497		2.0	"	500	0.22	99	80-120	16	20
Silver	50.6		7.0	"	50.0	ND	101	80-120	3	20
Sodium	6810		500	"	5000	1600	104	80-120	2	20
Гhallium	610		2.0	"	500	ND	122	80-120	7	20
Гitanium	513		10	"	500	2.1	102	80-120	3	20
Vanadium	537	1.8	10	"	500	ND	107	80-120	2	20
Zinc	728		20	"	500	240	98	80-120	1	20
Post Spike (3080149-PS1)	Sou	rce: P30804	17-07		Prepared:	08/12/03	Analyze	d: 09/08/03		
Aluminum	4920		200	ug/l	5000	41	98	80-120		
Antimony	525		15	"	500	0.079	105	80-120		
Arsenic	499	12	25	"	500	3.7	99	80-120		
Barium	503		10	"	500	13	98	80-120		
Beryllium	54.7		1.0	"	50.0	ND	109	80-120		
Boron	528		100	"	500	ND	106	80-120		
Cadmium	55.2	2.1	10	"	50.0	ND	110	80-120		
Calcium	9860		1000	"	5000	4200	113	80-120		
Chromium	533		10	"	500	ND	107	80-120		
Cobalt	515		7.0	"	500	ND	103	80-120		

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 308014	9 - EPA	3010A
--------------	---------	-------

Post Spike (3080149-PS1)	Sour	ce: P30804	17-07		Prepared:	08/12/03	Analyzeo	1: 09/08/03
Copper	505		10	ug/l	500	12	99	80-120
Iron	5610		300	"	5000	210	108	80-120
Lead	500		10	"	500	1.5	100	80-120
Magnesium	6240		500	"	5000	1200	101	80-120
Manganese	544		10	"	500	20	105	80-120
Molybdenum	523		20	"	500	ND	105	80-120
Nickel	537	6.5	30	"	500	ND	107	80-120
Potassium	4900	570	2500	"	5000	630	85	80-120
Selenium	468		10	"	500	0.22	94	80-120
Silver	48.1		7.0	"	50.0	ND	96	80-120
Sodium	6470		500	"	5000	1600	97	80-120
Thallium	500		10	"	500	ND	100	80-120
Titanium	506		10	"	500	2.1	101	80-120
Vanadium	529	1.8	10	"	500	ND	106	80-120
Zinc	784		20	"	500	240	109	80-120

Batch 3080171 - EPA 245/7470A

Blank (3080171-BLK1)				Prepared & Aı	nalyzed: 08/12/	/03	
Mercury	ND	0.20	ug/l				
Laboratory Control Sample (308)	0171-BS1)			Prepared & A	nalyzed: 08/12/	/03	
Mercury	1.61	0.20	ug/l	1.59	101	80-120	
Duplicate (3080171-DUP1)	Source: P3	808047-07		Prepared & Ai	nalyzed: 08/12/	/03	
Mercury	ND	1.0	ug/l	N	ND		10



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Reporting MDL Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3080171 - EPA 245/7470A										
Matrix Spike (3080171-MS1)	Sour	ce: P308047-07		Prepared o	& Analyze	ed: 08/12/0	03			
Mercury	1.59	0.20	ug/l	1.59	ND	100	80-120			
Matrix Spike Dup (3080171-MSD1)	Sour	ce: P308047-07		Prepared a	& Analyze	ed: 08/12/0	03			
Mercury	1.59	0.20	ug/l	1.59	ND	100	80-120	0	20	
Post Spike (3080171-PS1)	Sour	ce: P308047-07		Prepared a	& Analyze	ed: 08/12/0	03			
Mercury	5.14	0.20	ug/l	3.98	ND	129	80-120			QM-07
Batch 3080172 - EPA 7471A										
Blank (3080172-BLK1)				Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	ND	0.017	mg/kg							
Laboratory Control Sample (3080172-	·BS1)			Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	0.119	0.019	mg/kg	0.127		94	80-120			
Duplicate (3080172-DUP1)	Sour	ce: P308047-02		Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	0.0293	0.017	mg/kg		0.13			126	10	QR-07
Matrix Spike (3080172-MS1)	Sour	ce: P308047-02		Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	0.265	0.018	mg/kg	0.117	0.13	115	80-120			
Matrix Spike Dup (3080172-MSD1)	Sour	ce: P308047-02		Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	0.274	0.016	mg/kg	0.108	0.13	133	80-120	3	20	QM-07
Post Spike (3080172-PS1)	Sour	ce: P308047-02		Prepared:	08/13/03	Analyzed	1: 08/14/03			
Mercury	0.0104		ug/ml	0.00159	0.0037	421	80-120			QM-07



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (3080213-BLK1)				Prepared & A	nalyzed: 08/18/	03
Aluminum	ND	25	mg/kg			
Antimony	ND	0.25	"			
Arsenic	ND	0.50	"			
Barium	ND	0.50	"			
Beryllium	ND	0.050	"			
Boron	ND	5.0	"			
Cadmium	ND	0.50	"			
Calcium	ND	50	"			
Chromium	ND	0.50	"			
Cobalt	ND	0.35	"			
Copper	ND	1.0	"			
Iron	ND	25	"			
Lead	ND	0.25	"			
Magnesium	ND	25	"			
Manganese	ND	0.50	"			
Molybdenum	ND	1.0	"			
Nickel	ND	1.5	"			
Potassium	ND	120	"			
elenium	ND	0.50	"			
ilver	ND	0.35	"			
odium	ND	25	"			
Thallium	ND	0.10	"			
Гitanium	ND	1.0	"			
/anadium	ND	0.50	"			
Zinc	ND	1.0	"			
aboratory Control Sample (3	3080213-BS1)			Prepared & A	nalyzed: 08/18/	03
Aluminum	230	25	mg/kg	250	92	80-120
Antimony	25.8	0.25	"	25.0	103	80-120
Arsenic	24.3	0.50	"	25.0	97	80-120
Barium	24.3	0.50	"	25.0	97	80-120
Beryllium	2.31	0.050	"	2.50	92	80-120
Boron	22.6	5.0	"	25.0	90	80-120
Cadmium	2.43	0.50	"	2.50	97	80-120
Calcium	232	50	"	250	93	80-120
Chromium	23.9	0.50	"	25.0	96	80-120
Cobalt	22.6	0.35	"	25.0	90	80-120

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080213 - EPA 3050B										
Laboratory Control Sample (30					& Analyze	d: 08/18				
Copper	23.8	1.0	mg/kg	25.0		95	80-120			
Iron	240	25	"	250		96	80-120			
Lead	24.8	0.25	"	25.0		99	80-120			
Magnesium	231	25	"	250		92	80-120			
Manganese	23.4	0.50	"	25.0		94	80-120			
Molybdenum	23.1	1.0	"	25.0		92	80-120			
Nickel	23.1	1.5	"	25.0		92	80-120			
Potassium	228	120	"	250		91	80-120			
Selenium	25.2	0.50	"	25.0		101	80-120			
Silver	2.38	0.35	"	2.50		95	80-120			
Sodium	238	25	"	250		95	80-120			
Thallium	25.4	0.10	"	25.0		102	80-120			
Titanium	23.0	1.0	"	25.0		92	80-120			
Vanadium	23.8	0.50	"	25.0		95	80-120			
Zinc	22.8	1.0	"	25.0		91	80-120			
Duplicate (3080213-DUP1)	Source: P	308071-01		Prepared	& Analyze	d: 08/18	/03			
Aluminum	13000	120	mg/kg		13000			0	10	
Antimony	ND	1.2	"		0.16				10	
Arsenic	2.75	2.4	"		3.5			24	10	QR-07
Barium	106	2.4	"		100			6	10	
Beryllium	0.313	0.24	"		0.32			2	10	
Boron	2.06	24	"		1.6				10	
Cadmium	ND	2.4	"		0.36				10	
Calcium	2570	240	"		2400			7	10	
Chromium	60.6	2.4	"		56			8	10	
Cobalt	12.1	1.7	"		11			10	10	
Copper	35.2	4.7	"		33			6	10	
Iron	22200	120	"		21000			6	10	
Lead	8.54	1.2	"		8.2			4	10	
Magnesium	6100	120	"		5900			3	10	
Manganese	441	2.4	"		410			7	10	
Molybdenum	ND	4.7	"		1.1				10	
Nickel	58.4	7.1	"		54			8	10	
Potassium	1580	590	"		1500			5	10	
Selenium	ND	2.4	"		0.17				10	
Silver	ND	1.7	"		ND				10	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch	3080213	- EPA	3050B
-------	---------	-------	-------

Duplicate (3080213-DUP1)	Source:	P308071-01		Prepared	& Analyze	d: 08/18	03			
Sodium	228	120	mg/kg		220			4	10	
Thallium	0.122	0.47	"		0.14			14	10	QR-07
Titanium	639	4.7	"		610			5	10	
Vanadium	49.9	2.4	"		47			6	10	
Zinc	104	47	"		68			42	10	QR-07
Matrix Spike (3080213-MS1)	Source:	P308071-01		Prepared	& Analyze	d: 08/18	03			
Aluminum	15200	24	mg/kg	243	13000	905	80-120			QM-4X
Antimony	10.0	0.24	"	24.3	0.16	40	80-120			QM-07
Arsenic	25.4	0.49	"	24.3	3.5	90	80-120			
Barium	127	0.49	"	24.3	100	111	80-120			
Beryllium	2.46	0.049	"	2.43	0.32	88	80-120			
Boron	20.7	4.9	"	24.3	1.6	79	80-120			QM-07
Cadmium	2.55	0.49	"	2.43	0.36	90	80-120			
Calcium	2730	49	"	243	2400	136	80-120			QM-4X
Chromium	63.4	0.49	"	24.3	56	30	80-120			QM-07
Cobalt	30.1	0.34	"	24.3	11	79	80-120			QM-07
Copper	60.3	0.97	"	24.3	33	112	80-120			
Iron	20800	24	"	243	21000	NR	80-120			QM-4X
Lead	30.5	0.24	"	24.3	8.2	92	80-120			
Magnesium	4890	24	"	243	5900	NR	80-120			QM-4X
Manganese	430	0.49	"	24.3	410	82	80-120			
Molybdenum	21.2	0.97	"	24.3	1.1	83	80-120			
Nickel	59.0	1.5	"	24.3	54	21	80-120			QM-07
Potassium	1840	120	"	243	1500	140	80-120			QM-4X
Selenium	21.9	0.49	"	24.3	0.17	89	80-120			
Silver	1.83	0.34	"	2.43	ND	75	80-120			QM-07
Sodium	485	24	"	243	220	109	80-120			
Thallium	23.2	0.097	"	24.3	0.14	95	80-120			
Titanium	715	0.97	"	24.3	610	432	80-120			QM-4X
Vanadium	68.8	0.49	"	24.3	47	90	80-120			
Zinc	92.7	9.7	"	24.3	68	102	80-120			



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

Reported: 09/09/03 16:50

P308071

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

												i
			Reporting		Spike	Source		%REC		RPD		ĺ
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	ĺ

Matrix Spike Dup (3080213-MSD1)	Source:	P308071-01		Prepared	& Analyze	d: 08/18/	/03			
Aluminum	16000	25	mg/kg	250	13000	NR	80-120	5	20	QM-4X
Antimony	9.33	0.25	"	25.0	0.16	37	80-120	7	20	QM-07
Arsenic	26.0	0.50	"	25.0	3.5	90	80-120	2	20	
Barium	135	0.50	"	25.0	100	140	80-120	6	20	QM-4X
Beryllium	2.54	0.050	"	2.50	0.32	89	80-120	3	20	
Boron	21.1	5.0	"	25.0	1.6	78	80-120	2	20	QM-07
Cadmium	2.47	0.50	"	2.50	0.36	84	80-120	3	20	
Calcium	2880	50	"	250	2400	192	80-120	5	20	QM-4X
Chromium	61.8	0.50	"	25.0	56	23	80-120	3	20	QM-07
Cobalt	30.4	0.35	"	25.0	11	78	80-120	1	20	QM-07
Copper	59.0	1.0	"	25.0	33	104	80-120	2	20	
Iron	22300	25	"	250	21000	520	80-120	7	20	QM-4X
Lead	31.9	0.25	"	25.0	8.2	95	80-120	4	20	
Magnesium	4730	25	"	250	5900	NR	80-120	3	20	QM-4X
Manganese	440	0.50	"	25.0	410	120	80-120	2	20	
Molybdenum	21.2	1.0	"	25.0	1.1	80	80-120	0	20	
Nickel	57.8	1.5	"	25.0	54	15	80-120	2	20	QM-07
Potassium	1910	120	"	250	1500	164	80-120	4	20	QM-4X
Selenium	22.5	0.50	"	25.0	0.17	89	80-120	3	20	
Silver	1.84	0.35	"	2.50	ND	74	80-120	0.5	20	QM-07
Sodium	531	25	"	250	220	124	80-120	9	20	QM-07
Thallium	23.8	0.10	"	25.0	0.14	95	80-120	3	20	
Titanium	702	1.0	"	25.0	610	368	80-120	2	20	QM-4X
Vanadium	71.8	0.50	"	25.0	47	99	80-120	4	20	
Zinc	84.2	10	"	25.0	68	65	80-120	10	20	QM-07
Post Spike (3080213-PS1)	Source:	P308071-01		Prepared	& Analyze	d: 08/18	/03			
Aluminum	12600	24	mg/kg	236	13000	NR	80-120			QM-4X
Antimony	25.1	0.24	"	23.6	0.16	106	80-120			
Arsenic	26.0	0.47	"	23.6	3.5	95	80-120			
Barium	124	0.47	"	23.6	100	102	80-120			
Beryllium	2.41	0.047	"	2.36	0.32	89	80-120			
Boron	21.8	4.7	"	23.6	1.6	86	80-120			
Cadmium	2.56	0.47	"	2.36	0.36	93	80-120			
Calcium	2560	47	"	236	2400	68	80-120			QM-4X
Chromium	76.6	0.47	"	23.6	56	87	80-120			-
Cobalt	30.4	0.33	"	23.6	11	82	80-120			

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD		
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 3080	213 - E	EPA 3050B
------------	---------	-----------

Post Spike (3080213-PS1)	Source: I	2308071-01		Prepared	& Analyze	/03		
Copper	54.5	0.94	mg/kg	23.6	33	91	80-120	
Iron	20600	24	"	236	21000	NR	80-120	Ql
Lead	32.7	0.24	"	23.6	8.2	104	80-120	
Magnesium	6030	24	"	236	5900	55	80-120	Ql
Manganese	429	0.47	"	23.6	410	81	80-120	
Molybdenum	22.3	0.94	"	23.6	1.1	90	80-120	
Nickel	73.8	1.4	"	23.6	54	84	80-120	
Potassium	1720	120	"	236	1500	93	80-120	
Selenium	24.0	0.47	"	23.6	0.17	101	80-120	
Silver	1.95	0.33	"	2.36	ND	83	80-120	
Sodium	445	24	"	236	220	95	80-120	
Thallium	24.9	0.094	"	23.6	0.14	105	80-120	
Titanium	622	0.94	"	23.6	610	51	80-120	QI
Vanadium	67.7	0.47	"	23.6	47	88	80-120	
Zinc	327	9.4	"	23.6	68	NR	80-120	Q

Batch 3080257 - General Preparation

Blank (3080257-BLK1)				Prepared &	& Analyze	ed: 08/14/	/03		
Hexavalent Chromium	ND	0.0050	mg/l						
Laboratory Control Sample (3080	257-BS1)			Prepared &	& Analyze	ed: 08/14/	03	 	
Hexavalent Chromium	0.105	0.0050	mg/l	0.100		105	80-120		
Matrix Spike (3080257-MS1)	Source: I	2308260-02		Prepared &	& Analyze	ed: 08/14/	03		
Hexavalent Chromium	0.127	0.0056	mg/l	0.111	ND	114	75-125		



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Total Metals by EPA 6000/7000 Series Methods - Quality Control Sequoia Analytical - Petaluma

Matrix Spike Dup (3080257-MSD1) Source: P308260-02 Prepared & Analyzed: 08/14/03	Analyte	Result	Reporting MDL Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Hexavalent Chromium 0.121 0.0056 mg/l 0.111 ND 109 75-125 5 20	Batch 3080257 - General Prepara	tion									
Blank (3080258 - General Preparation Prepared: 08/14/03 Analyzed: 08/15/03 Analyzed:	Matrix Spike Dup (3080257-MSD1)	Sour	rce: P308260-02		Prepared	& Analyzo	ed: 08/14/	03			
Blank (3080258-BLK1)	Hexavalent Chromium	0.121	0.0056	mg/l	0.111	ND	109	75-125	5	20	
Rexavalent Chromium ND 0.21 mg/kg Prepared: 08/14/03 Analyzed: 08/15/03	Batch 3080258 - General Prepara	tion									
Prepared: 08/14/03 Analyzed: 08/15/03	Blank (3080258-BLK1)				Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 3.34 0.21 mg/kg 4.00 84 80-120	Hexavalent Chromium	ND	0.21	mg/kg							
Matrix Spike (3080258-MS1) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 3.31 0.21 mg/kg 4.02 0.64 66 75-125 QM Matrix Spike (3080258-MS2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 778 10 mg/kg 978 0.64 79 75-125 QM Matrix Spike (3080258-MS3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 4.67 0.21 mg/kg 4.02 0.64 100 75-125 0.64 100 75-125 Matrix Spike Dup (3080258-MSD1) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 0.64 65 75-125 2 2 20 QM Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 0.64 74 75-125 13 20 QM	Laboratory Control Sample (3080258	-BS1)			Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 3.31 0.21 mg/kg 4.02 0.64 66 75-125 QM	Hexavalent Chromium	3.34	0.21	mg/kg	4.00		84	80-120			
Matrix Spike (3080258-MS2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 778 10 mg/kg 978 0.64 79 75-125 QM Matrix Spike (3080258-MS3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Matrix Spike Dup (3080258-MSD1) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Matrix Spike (3080258-MS1)	Sour	ce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 778 10 mg/kg 978 0.64 79 75-125 QM	Hexavalent Chromium	3.31	0.21	mg/kg	4.02	0.64	66	75-125			QM-07
Matrix Spike (3080258-MS3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 4.67 0.21 mg/kg 4.02 0.64 100 75-125 Matrix Spike Dup (3080258-MSD1) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 3.23 0.21 mg/kg 3.97 0.64 65 75-125 2 2 20 QM Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Matrix Spike (3080258-MS2)	Sour	rce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 4.67 0.21 mg/kg 4.02 0.64 100 75-125	Hexavalent Chromium	778	10	mg/kg	978	0.64	79	75-125			QM-07
Matrix Spike Dup (3080258-MSD1) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 3.23 0.21 mg/kg 3.97 0.64 65 75-125 2 20 QM Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Matrix Spike (3080258-MS3)	Sour	rce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 3.23 0.21 mg/kg 3.97 0.64 65 75-125 2 20 QM Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Hexavalent Chromium	4.67	0.21	mg/kg	4.02	0.64	100	75-125			
Matrix Spike Dup (3080258-MSD2) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Matrix Spike Dup (3080258-MSD1)	Sour	rce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 686 10 mg/kg 927 0.64 74 75-125 13 20 QM Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03 Prepared: 08/14/03 Analyzed: 08/15/03	Hexavalent Chromium	3.23	0.21	mg/kg	3.97	0.64	65	75-125	2	20	QM-07
Matrix Spike Dup (3080258-MSD3) Source: P308071-01 Prepared: 08/14/03 Analyzed: 08/15/03	Matrix Spike Dup (3080258-MSD2)	Sour	rce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
2 part - up (Hexavalent Chromium	686	10	mg/kg	927	0.64	74	75-125	13	20	QM-07
	Matrix Spike Dup (3080258-MSD3)	Sour	ce: P308071-01		Prepared:	08/14/03	Analyzed	1: 08/15/03			
Hexavalent Chromium 4.17 0.21 mg/kg 4.02 0.64 88 75-125 11 20	Hexavalent Chromium	4.17	0.21	mg/kg	4.02	0.64	88	75-125	11	20	





Blank (3080253-BLK1)

No TICs found

Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

RPD

%REC

Tentatively Identified Compounds by GC/MS - Quality Control Sequoia Analytical - Petaluma

Spike

Source

Prepared: 08/14/03 Analyzed: 08/21/03

Reporting

300

ND

Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3080097 - EPA 3520B I	LiqLiquid										
Blank (3080097-BLK1)					Prepared:	08/06/03	Analyzed	: 08/13/03			
No TICs found	ND		10	ug/l							
Batch 3080253 - EPA 3550A S	Sonication										

ug/kg



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080097 - EPA 3520B LiqLiquid
--

Blank (3080097-BLK1)					Prepared: 08/06/03 Analyzed: 08/13/03
Acenaphthene	ND	1.2	10	ug/l	
Acenaphthylene	ND	1.4	10	"	
Anthracene	ND	0.60	10	"	
Azobenzene	ND	0.63	20	"	
Benzidine	ND	3.2	50	"	
Benzoic acid	ND	3.9	50	"	
Benzo (a) anthracene	ND	0.44	10	"	
Benzo (b+k) fluoranthene (total)	ND	1.1	10	"	
Benzo (g,h,i) perylene	ND	0.64	10	"	
Benzo (a) pyrene	ND	0.87	10	"	
Benzyl alcohol	ND	3.9	20	"	
Bis(2-chloroethoxy)methane	ND	1.1	10	"	
Bis(2-chloroethyl)ether	ND	1.5	10	"	
Bis(2-chloroisopropyl)ether	ND	1.5	10	"	
Bis(2-ethylhexyl)phthalate	ND	2.8	10	"	
4-Bromophenyl phenyl ether	ND	0.70	10	"	
Butyl benzyl phthalate	ND	2.7	10	"	
4-Chloroaniline	ND	0.55	20	"	
4-Chloro-3-methylphenol	ND	2.3	20	"	
2-Chloronaphthalene	ND	1.4	10	"	
2-Chlorophenol	ND	0.31	10	"	
4-Chlorophenyl phenyl ether	ND	0.97	10	"	
Chrysene	ND	0.45	10	"	
Dibenz (a,h) anthracene	ND	0.55	10	"	
Dibenzofuran	ND	1.1	10	"	
Di-n-butyl phthalate	ND	1.1	10	"	
1,2-Dichlorobenzene	ND	1.8	10	"	
1,3-Dichlorobenzene	ND	1.8	10	"	
1,4-Dichlorobenzene	ND	1.8	10	"	
3,3´-Dichlorobenzidine	ND	2.9	20	"	
2,4-Dichlorophenol	ND	0.47	10	"	
Diethyl phthalate	ND	0.42	10	"	
2,4-Dimethylphenol	ND	1.4	10	"	
Dimethyl phthalate	ND	0.56	10	"	
4,6-Dinitro-2-methylphenol	ND	3.4	50	"	
2,4-Dinitrophenol	ND	2.3	50	"	
2,4-Dinitrotoluene	ND	0.82	10	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080097 - EPA 3520B Li	qLiquid				
Blank (3080097-BLK1)					Prepared: 08/06/03 Analyzed: 08/13/03
2,6-Dinitrotoluene	ND	0.76	10	ug/l	
Di-n-octyl phthalate	ND	0.81	10	"	
Fluoranthene	ND	0.44	10	"	
Fluorene	ND	1.0	10	"	
Hexachlorobenzene	ND	0.79	10	"	
Hexachlorobutadiene	ND	1.5	10	"	
Hexachlorocyclopentadiene	ND	0.31	10	"	
Hexachloroethane	ND	1.7	10	"	
Indeno (1,2,3-cd) pyrene	ND	0.61	10	"	
Isophorone	ND	0.71	10	"	
2-Methylnaphthalene	ND	1.4	10	"	
2-Methylphenol	ND	3.4	10	"	
4-Methylphenol	ND	3.0	10	"	
Naphthalene	ND	1.6	10	"	
2-Nitroaniline	ND	0.69	50	"	
3-Nitroaniline	ND	0.54	50	"	
-Nitroaniline	ND	0.61	50	"	
Nitrobenzene	ND	1.3	10	"	
2-Nitrophenol	ND	0.42	10	"	
l-Nitrophenol	ND	0.51	50	"	
N-Nitrosodimethylamine	ND	1.4	20	"	
N-Nitrosodiphenylamine	ND	3.9	10	"	
N-Nitrosodi-n-propylamine	ND	0.58	10	"	
Pentachlorophenol	ND	3.1	50	"	
Phenanthrene	ND	0.56	10	"	
Phenol	ND	0.48	10	"	
Pyrene	ND	0.28	10	"	
Pyridine	ND	3.8	10	"	
,2,4-Trichlorobenzene	ND	1.7	10	"	
2,4,5-Trichlorophenol	ND	0.61	10	"	
2,4,6-Trichlorophenol	ND	0.31	10	"	
Surrogate: 2-Fluorophenol	111			"	150 74 15-103
Surrogate: Phenol-d6	123			"	<i>150</i> 82 <i>18-115</i>
Surrogate: Nitrobenzene-d5	99.9			"	100 100 39-103
Surrogate: 2-Fluorobiphenyl	98.2			"	100 98 40-124
Surrogate: 2,4,6-Tribromophenol	152			"	150 101 11-142

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (3080097-BLK1)					Prepared: 08/0	6/03 Analyze	d: 08/13/03			
Surrogate: Terphenyl-d14	122			ug/l	100	122	56-139			
Laboratory Control Sample (3080	097-BS1)				Prepared: 08/0	6/03 Analyze	d: 08/13/03			
Acenaphthene	105	1.2	10	ug/l	100	105	58-120			
4-Chloro-3-methylphenol	112	2.3	20	"	100	112	51-116			
2-Chlorophenol	92.9	0.31	10	"	100	93	28-111			
1,4-Dichlorobenzene	80.7	1.8	10	"	100	81	29-108			
2,4-Dinitrotoluene	124	0.82	10	"	100	124	60-114			Q-LIM
4-Nitrophenol	98.2	0.51	50	"	100	98	25-148			
N-Nitrosodi-n-propylamine	95.8	0.58	10	"	100	96	29-119			
Pentachlorophenol	111	3.1	50	"	100	111	40-131			
Phenol	82.5	0.48	10	"	100	82	22-117			
Pyrene	120	0.28	10	"	100	120	52-127			
1,2,4-Trichlorobenzene	91.8	1.7	10	"	100	92	24-131			
Surrogate: 2-Fluorophenol	118			"	150	79	15-103			
Surrogate: Phenol-d6	119			"	150	79	18-115			
Surrogate: Nitrobenzene-d5	101			"	100	101	39-103			
Surrogate: 2-Fluorobiphenyl	101			"	100	101	40-124			
Surrogate: 2,4,6-Tribromophenol	176			"	150	117	11-142			
Surrogate: Terphenyl-d14	118			"	100	118	56-139			
Laboratory Control Sample Dup (3080097-BSD	1)			Prepared: 08/0	6/03 Analyze	d: 08/13/03			
Acenaphthene	101	1.2	10	ug/l	100	101	58-120	4	27	
4-Chloro-3-methylphenol	112	2.3	20	"	100	112	51-116	0	30	
2-Chlorophenol	86.3	0.31	10	"	100	86	28-111	7	39	
1,4-Dichlorobenzene	68.1	1.8	10	"	100	68	29-108	17	41	
2,4-Dinitrotoluene	123	0.82	10	"	100	123	60-114	0.8	22	Q-LIM
4-Nitrophenol	92.9	0.51	50	"	100	93	25-148	6	44	
N-Nitrosodi-n-propylamine	96.7	0.58	10	"	100	97	29-119	0.9	44	
Pentachlorophenol	110	3.1	50	"	100	110	40-131	0.9	33	
Phenol	78.8	0.48	10	"	100	79	22-117	5	33	
Pyrene	119	0.28	10	"	100	119	52-127	0.8	25	
1,2,4-Trichlorobenzene	83.5	1.7	10	"	100	84	24-131	9	48	
Surrogate: 2-Fluorophenol	106			"	150	71	15-103			
Surrogate: Phenol-d6	114			"	150	76	18-115			
Surrogate: Nitrobenzene-d5	98.7			"	100	99	39-103			
Surrogate: 2-Fluorobiphenyl	101			"	100	101	40-124			

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD		
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	

Batch 3080097 - EPA 3520B LiqLiquid

Laboratory Control Sample Dup	(3080097-BSD1)	Prepared: 08/06/03 Analyzed: 08/13/03						
Surrogate: 2,4,6-Tribromophenol	179	ug/l	150	119	11-142			
Surrogate: Terphenyl-d14	120	"	100	120	56-139			

Batch 3080253 - EPA 3550A Sonication

Blank (3080253-BLK1)					Prepared: 08/14/03 Analyzed: 08/21/03
Acenaphthene	ND	8.7	330	ug/kg	-
Acenaphthylene	ND	7.6	330	"	
Anthracene	ND	14	330	"	
Azobenzene	ND	20	330	"	
Benzidine	ND	1700	1700	"	
Benzoic acid	ND	2.7	1700	"	
Benzo (a) anthracene	ND	7.6	330	"	
Benzo (b+k) fluoranthene (total)	ND	13	330	"	
Benzo (g,h,i) perylene	ND	8.8	330	"	
Benzo (a) pyrene	ND	10	330	"	
Benzyl alcohol	ND	11	660	"	
Bis(2-chloroethoxy)methane	ND	9.1	330	"	
Bis(2-chloroethyl)ether	ND	15	330	"	
Bis(2-chloroisopropyl)ether	ND	16	330	"	
Bis(2-ethylhexyl)phthalate	ND	9.3	330	"	
4-Bromophenyl phenyl ether	ND	13	330	"	
Butyl benzyl phthalate	ND	11	330	"	
4-Chloroaniline	ND	58	660	"	
4-Chloro-3-methylphenol	ND	11	660	"	
2-Chloronaphthalene	ND	9.9	330	"	
2-Chlorophenol	ND	16	330	"	
4-Chlorophenyl phenyl ether	ND	13	330	"	
Chrysene	ND	11	330	"	
Dibenz (a,h) anthracene	ND	18	330	"	
Dibenzofuran	ND	9.6	330	"	
Di-n-butyl phthalate	ND	12	330	"	
1,2-Dichlorobenzene	ND	16	330	"	
1,3-Dichlorobenzene	ND	14	330	"	
1,4-Dichlorobenzene	ND	15	330	"	
3,3´-Dichlorobenzidine	ND	44	660	"	
2,4-Dichlorophenol	ND	15	330	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 30802	253 - EPA	3550A	Sonication
-------------	-----------	-------	-------------------

Blank (3080253-BLK1)					Prepared: 08/14/03 Analyzed: 08/21/03
Diethyl phthalate	ND	14	330	ug/kg	•
2,4-Dimethylphenol	ND	36	330	"	
Dimethyl phthalate	ND	11	330	"	
4,6-Dinitro-2-methylphenol	ND	17	1700	"	
2,4-Dinitrophenol	ND	10	1700	"	
2,4-Dinitrotoluene	ND	20	330	"	
2,6-Dinitrotoluene	ND	13	330	"	
Di-n-octyl phthalate	ND	11	330	"	
Fluoranthene	ND	11	330	"	
Fluorene	ND	7.9	330	"	
Hexachlorobenzene	ND	15	330	"	
Hexachlorobutadiene	ND	17	330	"	
Hexachlorocyclopentadiene	ND	10	330	"	
Hexachloroethane	ND	17	330	"	
Indeno (1,2,3-cd) pyrene	ND	11	330	"	
Isophorone	ND	14	330	"	
2-Methylnaphthalene	ND	10	330	"	
2-Methylphenol	ND	16	330	"	
4-Methylphenol	ND	11	330	"	
Naphthalene	ND	13	330	"	
2-Nitroaniline	ND	17	1700	"	
3-Nitroaniline	ND	18	1700	"	
4-Nitroaniline	ND	22	1700	"	
Nitrobenzene	ND	16	330	"	
2-Nitrophenol	ND	14	330	"	
4-Nitrophenol	ND	23	1700	"	
N-Nitrosodimethylamine	ND	16	330	"	
N-Nitrosodiphenylamine	ND	17	330	"	
N-Nitrosodi-n-propylamine	ND	15	330	"	
Pentachlorophenol	ND	12	1700	"	
Phenanthrene	ND	14	330	"	
Phenol	ND	12	330	"	
Pyrene	ND	12	330	"	
1,2,4-Trichlorobenzene	ND	15	330	"	
2,4,5-Trichlorophenol	ND	14	330	"	
2,4,6-Trichlorophenol	ND	9.4	330	"	

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080253 - EPA 3550A Sonication
Blank (3080253-BLK1) Prepared: 08/14/03 Analyzed: 08/21/03
Surrogate: 2-Fluorophenol 2930 ug/kg 5000 59 11-120
Surrogate: Phenol-d6 3390 " 5000 68 16-130
Surrogate: Nitrobenzene-d5 2410 " 3330 72 16-126
Surrogate: 2-Fluorobiphenyl 2560 " 3330 77 28-134
Surrogate: 2,4,6-Tribromophenol 4100 " 5000 82 51-144
Surrogate: Terphenyl-d14 3240 " 3330 97 64-119
Laboratory Control Sample (3080253-BS1) Prepared: 08/14/03 Analyzed: 08/21/03
Acenaphthene 2840 8.7 330 ug/kg 3330 85 34-114
4-Chloro-3-methylphenol 2970 11 660 " 3330 89 24-118
2-Chlorophenol 2580 16 330 " 3330 77 29-101
1,4-Dichlorobenzene 2480 15 330 " 3330 74 25-104
2,4-Dinitrotoluene 3540 20 330 " 3330 106 42-116
4-Nitrophenol 3000 23 1700 " 3330 90 31-109
N-Nitrosodi-n-propylamine 2590 15 330 " 3330 78 23-117
Pentachlorophenol 3130 12 1700 " 3330 94 34-114
Phenol 2360 12 330 " 3330 71 20-105
Pyrene 3610 12 330 " 3330 108 30-124
1,2,4-Trichlorobenzene 2810 15 330 " 3330 84 28-112
Surrogate: 2-Fluorophenol 3450 " 5000 69 11-120
Surrogate: Phenol-d6 3580 " 5000 72 16-130
Surrogate: Nitrobenzene-d5 2670 " 3330 80 16-126
Surrogate: 2-Fluorobiphenyl 2820 " 3330 85 28-134
Surrogate: 2,4,6-Tribromophenol 4870 " 5000 97 51-144
Surrogate: Terphenyl-d14 3600 " 3330 108 64-119
Matrix Spike (3080253-MS1) Source: P308047-09 Prepared: 08/14/03 Analyzed: 08/21/03
Acenaphthene 2800 8.7 330 ug/kg 3330 ND 84 30-110
4-Chloro-3-methylphenol 2920 11 660 " 3330 ND 88 27-109
2-Chlorophenol 2470 16 330 " 3330 ND 74 24-98
1,4-Dichlorobenzene 2290 15 330 " 3330 ND 69 24-89
2,4-Dinitrotoluene 3410 20 330 " 3330 ND 102 35-110
4-Nitrophenol 2940 23 1700 " 3330 ND 88 20-110
N-Nitrosodi-n-propylamine 2600 15 330 " 3330 ND 78 23-109
Pentachlorophenol 2730 12 1700 " 3330 ND 82 25-123
Phenol 2310 12 330 " 3330 ND 69 19-100
Pyrene 3390 12 330 " 3330 ND 102 12-131

Sequoia Analytical - Petaluma



Project: Aerojet RI/FS
Project Number: N/A
Project Manager: Bruce Lewis

P308071 **Reported:** 09/09/03 16:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Petaluma

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 3080253 - EPA 3550A Sonication

Matrix Spike (3080253-MS1)	Sou	rce: P308047	7-09		Prepared:	08/14/03	Analyze	d: 08/21/03			
1,2,4-Trichlorobenzene	2680	15	330	ug/kg	3330	ND	80	17-110			
Surrogate: 2-Fluorophenol	3300			"	5000		66	11-120			
Surrogate: Phenol-d6	3490			"	5000		70	16-130			
Surrogate: Nitrobenzene-d5	2600			"	3330		78	16-126			
Surrogate: 2-Fluorobiphenyl	2630			"	3330		79	28-134			
Surrogate: 2,4,6-Tribromophenol	4720			"	5000		94	51-144			
Surrogate: Terphenyl-d14	3380			"	3330		102	64-119			
Matrix Spike Dup (3080253-MSD1)	Sou	rce: P308047	7-09		Prepared:	08/14/03	Analyze	d: 08/21/03			
Acenaphthene	2820	8.7	330	ug/kg	3330	ND	85	30-110	0.7	26	
4-Chloro-3-methylphenol	2890	11	660	"	3330	ND	87	27-109	1	21	
2-Chlorophenol	2460	16	330	"	3330	ND	74	24-98	0.4	27	
1,4-Dichlorobenzene	2330	15	330	"	3330	ND	70	24-89	2	25	
2,4-Dinitrotoluene	3400	20	330	"	3330	ND	102	35-110	0.3	15	
4-Nitrophenol	2930	23	1700	"	3330	ND	88	20-110	0.3	23	
N-Nitrosodi-n-propylamine	2570	15	330	"	3330	ND	77	23-109	1	31	
Pentachlorophenol	2620	12	1700	"	3330	ND	79	25-123	4	43	
Phenol	2300	12	330	"	3330	ND	69	19-100	0.4	21	
Pyrene	3450	12	330	"	3330	ND	104	12-131	2	26	
1,2,4-Trichlorobenzene	2700	15	330	"	3330	ND	81	17-110	0.7	30	
Surrogate: 2-Fluorophenol	3240			"	5000		65	11-120			
Surrogate: Phenol-d6	3460			"	5000		69	16-130			
Surrogate: Nitrobenzene-d5	2590			"	3330		78	16-126			
Surrogate: 2-Fluorobiphenyl	2720			"	3330		82	28-134			
Surrogate: 2,4,6-Tribromophenol	4580			"	5000		92	51-144			
Surrogate: Terphenyl-d14	3360			"	3330		101	64-119			





7.48

pН

Project: Aerojet RI/FS Project Number: N/A Project Manager: Bruce Lewis

P308071 Reported: 09/09/03 16:50

20

10

8.27

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
rmaryc	Result	WIDE	Emit	Omto	Level	Result	70KEC	Limits	КГБ	Limit	Trotes
Batch 3080162 - General Prep	aration										
Duplicate (3080162-DUP1)	Sou	rce: P3080	71-05		Prepared	& Analyz	ed: 08/08/0	03			
pH	6.88		2.00	pH Units		7.00			2	20	
Batch 3080163 - General Prep	aration										
Duplicate (3080163-DUP1)	Sou	rce: P3081	38-01		Prepared	& Analyz	ed: 08/08/0	03			

2.00 pH Units



Environmental Resources Management Project: Aerojet RI/FS P308071
2525 Natomas Park Drive, Suite 350 Project Number: N/A Reported:
Sacramento CA, 95833 Project Manager: Bruce Lewis 09/09/03 16:50

Notes and Definitions

HT-01	This sample was received beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
HT-04	This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
J	Estimated value.
Q-LIM	The percent recovery was outside of the control limits. The samples results may still be useful for their intended purpose.
QM-06	Due to noted non-homogeneity of the QC sample matrix, the MS/MSD did not provide reliable results for accuracy and precision. Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-4X	The spike recovery was outside of control limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QR-07	The RPD was outside control limits. The results may still be useful for their intended purpose.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis

Relative Percent Difference

RPD

7.67.35 v. 4						ER: PINK	- SAMPL	3RD COPY - SAMPLER: PINK		ATORY: Y	2ND COPY - LABORATORY: <i>YELLOW</i>		TAL OPERATIONS: W	ORIGINAL - ENVIRONMENTAL OPERATIONS: WHITE
	1630	5-03	90		(E)			S,	8			
						· ·	3						8	COMMENTS:
nt Congo and a	1/2 1/2		8		1	X			disconsistent and the second	ŭ	[8/S/8]	EX.	1200 C	Thomas (
LABORATORY DELIVERED TO:	990			Æ)	(SIGNATURE)		3Y LABORA	RÉCEIVED BY LABORATORY BY		ME	DATE/TIME		IRE)	HELINOMISHED BY/(SIGNATURE)
Courier		7		7	E SE	N T		3	0633	2.0%	8/5/		L.	Al Gover
METHOD DE SHIDMENT:					124	TURIE)	BY: (SIGNATURE)	RECEIVED BY:		M.	DATE	*	IRE)	[
TOTAL NO. OF SAMPLE CONTAINERS:				•		TURE	BY: (SIGNATURE)	HECEIVED BY:	4 7	O F	ST-STIME DATE/TIME	7		THE STATE OF
								Z	:				IPIK.	TOTALS
														1140
		TURE	TEMPERATU	COOLERTE	Š						/ /			
00		NO									/ /			1140
	E-2		QU	LER CUS	c00						/ /			
	NTACT	ST TST									/ /			1 1 4 M
											/ /			
											/ /			114 X
						an the same of the					/ /			4
00		X	\boxtimes	Ż	X	and the latest and th		55	30 200%	W	08/40/20	00	32D-5B0GD-30	1 1 1 4 1 321
30		X		X	X			- R	S 25 S	1333	08/DH103	0)5806-30	1114 H 321
07		\triangle	X	X	X			× =	0 2x6 =	1310	08/04/03	25	7582-28	1114 G 521
90		\times		\sim	X		SW.	55	5	124	08/04/03	5)-5B06-15	1114 = 321
00		X			X		1	1 5ch (1)	5 ramber	124	08/04/03	1	D-51306-15E	
40		X	X	X	X		300	25	Ø	0 127	340H0	ō	0-5806-10	1114 D 32
X		X	$\hat{\mathbb{X}}$		X		- GM	2 = N	N	120	0864103	225	>-5806-2.5	1114 C 321
02			\times	V	X		6-1	Z = Z		50920	らんの子のろ	N	35B01-15	1 1 1 4 B 321
10-1108021				V	X		GM	- B	S	3 090	08/04/03	2,5	52D-5807-25	1114 A 32
REMARKS	LABO	Pt	TP	NA SECURIOR SECURIOR SECURIOR SE	BNA	*****************			E CONTAINER	TIME	DATE MM/DD/YY	DEPTH (FT.)	FIELD SAMPLE NO.	COC SAMPLE ID
	ORATORY	ł	H	CHLORATE	's EPA ALS EPA	ATILE ORGAI	TYPE (US	F SAMPLE				anne.	MILL	SAMPLEHS (SIGNATURE)
	QA/Q	30	8c	MARKET CONTRACT		***************************************		CONTA				,		
	С	00	27			EPA 8.		AINER				E NO:	AUGER HOLE NO:	SOURCE SITE NO:
anlysis			NAME AND ADDRESS OF			_				200	421.0	4	Awo	
るうつっけ イベケーラ		ANALYSES	- 1	D SAMPLE	EQUESTED	æ		-			A CONTRACTOR OF THE PROPERTY O	R NO:	WORK ORDER NO:	
No 1114				Record	ec		0	Custody		5	Chain of			
											2		õ	SENCORP

/.6/.35 V. 4						PINK	MPLER:	3RD COPY – SAMPLER: <i>PINK</i>	3RD C	Y: YELLOW	ABORATOR	2ND COPY - LABORATORY: <i>YELLOW</i>		ENVIRONMENTAL OPERATIONS: WHITE	PONMENTAL	ORIGINAL - ENVIF
3 (A)										•	83			2		COMMEN O
	2 / 5	C	Ex.		`	1					8/5/03		1580	Den 15	a (3	Mony
LABORATORY DELIVERED TO:	890		ţ		SIGNATURE	_ 1	BORATOR	RECEIVED BY LABORATORY BY:			m				(SIGNA JURE)	RELINCUISHED BY
METHOD OF SHIPMENT:		₹,		> 	£				1	3 0655	DATE TIME	On the last of the			(SIGNATURE)	HELINGOISHED BY: (SKANATORE)
7					R	The same of the sa			1	-	50HB		Sun	Mun	JWG -	MEMIN
TOTAL NO. OF SAMPLE CONTAINERS:					,) (G	(SIGNATURE)	. 74-	7 RECEIVED BY	1441	DATE/TIME		۵.	1/1/0	(SIGNATURE)	
·								Ŧ								TOTALS
																1114 Q
												/				1114 P
											_	/ /				1114 0
							. —									1114 Z
	<i> </i>					1										1114 M
			N	M							7					1114
							-		7	5	_	/ /				1114
												/				1114 J
		X	X	X	X			Ž	P. 588.2	330 3	031	4780	0 N	32D-3B0GD-30	320-5	1114
		X	\times	X	X			2	かるが	330 8	103 [08/CH	ON	1-5806-30	[32]	1114 H
		K	X	X	\times			_	12557 1256 =	310 3		2/04	52	582-25	122	1·1 1 4 G
		X	X		X		SW/	12	5x6"	245 3	103 1	CB 104	15	5B06-15	320-	1114 F
		X		\ \!\	X		ļi.	W	1 pay	240 12	103	90180		SB06-15E	32D-	1114 E
		X	X	X	X		MS	<u> </u>	5x62	7.30 7	103 1	2404	ō	10/2005	520-	1114 D
		\times	\hat{X}	\searrow	X		[WE	2	24611	205 2	103 1	0864	225	5B06-2,5	-425 :	1114 C
			Ź	V	X		J-/N	_	5×6" 9×2.		1036	04/04	S	SB07-15	327	1114 B
3			X	\bigvee	X		6M	<i>i</i>	5x611	7 SOBO	03.	140/20	2,5	-51507-2.5	321	1114 A
	LAB	PH	TF		MET	BNA		# 0	TYPE OF CONTAINER	TIME C	ΥΥ	DATE MM/DD/YY	DEPTH (FT.)	FIELD SAMPLE NO.	S,	COC SAMPLE ID
	ORATORY	+		CHLORATI	ALS EPA	ATILE ORGA 's <i>EPA</i>	TYPE (US	F SAMPLE					amy.	MILL	S (SIGNATURE)	SAMPLEHS (SIGNATUHE)
	QA				6010			CON					7			
	rac	?0C	01	DL-SW BZT	0		i	ITAINE					E NO:	AUGER HÖLE NO:	Ö	SOURCE,SITE NO:
«lysis		- 1		-006		- 1	0240	RS			50.1	327	4	Aeroje		
Report TICS IN		ANALYSES	- 1	SAMPLE	REQUESTED	REQ							R NO:	WORK ORDER NO:		E.T.R. NO:
20 1114			i Denisiferati	Record	ec		dy	sto	Custody	of	Chain	<u>C</u>				AEROJET
														4		

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

/	lution.	rd of reso	r and attach reco	If Circled, contact Project Manager and attach record of resolution.	Circled, c) JI *		
							+/-2°C) (Yeş// No*	equiring thermal pres.:4+/-2°C)
							nples	Acceptance range for samples
		//					1.1	2. Temp Rec. at Lab:
		7	((Yes/No*	used:
			00) (1. Proper Preservatives
		1					Kes)/ No*	hold time:
		1	1)\ <u>`</u>	0. Sample received within
							(Yes) No*	labels agree?
			×)	reports and sample
)			G	custody reports, traffic
). Does information on
							Leaking*	
							(Intagt / Broken* /	8. Sample Condition:
		79					ол Chain-of-Custody	
	+		mc_	32D-S13060-30			Disted / Not Listed	7. Sample IDs:
			V B C	4 + 30			Present / Absent	6. Sample Labels:
		on property of the control of the co	mc	25				5. Airbill #:
		S	x2 mc	75			Present / Absent)	
		4	3000	(Airbill / Stieker	4. Airbill:
		3	LINDA	378			Present / Absent	Packing List:
		~	MC	9				3. Traffic Reports or
			XZMC	SR06-25			Presenty Absent*	2. Chain-of-Custody
		(1	45			Intact / Broken*	
	8403	5	mc	32D5B07-2,5	,	i i	Present / Absent	1. Custody Seal(s)
CONDITION (ETC.)	MATRIX SAMPLED	MATRIX	DESCRIPTION	CLIENT ID	E# #	SAMPLE #		
	DATE	SAMPLE				LAB	CIRCLE THE APPROPRIATE RESPONSE	CIRCLE THE APPR
irposes: YES/NO	regulatory purposes:							
for	(Wastewater) for		8-6-03	LOG IN DATE:			P30807	WORKORDER:
irposes: YES/NO	regulatory purposes:		1630	TIME Received at Lab:			(AS)	REC. BY (PRINT)
ter) for	(Drinking water) for		8-5-03	DATE Received at Lab:	JK.	We!	7	CLIENT NAME:

Sample Receipt Log Revision 2.1 (11/10/00) Replaces Revision 2 (11/06/00)

Page _____ of ___